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# BULLETIN

OF THE

# NORTH CAROLINA BOARD OF HEALTH.

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VOL. X.

APRIL, 1895.

No. 1.

### Infectiousness of Milk.

We have recently received from the Secretary a copy of a report made to the Trustees of the Massachusetts Society for Promoting Agriculture on the infectiousness of milk, especially that from tuberculous cows with no lesion of the udder, by Dr. Harold C. Ernst, Bacteriologist of the Harvard Medical School. The results of Dr. Ernst's investigations are so interesting and valuable that, inasmuch as his report will hardly come under the eye of most of our readers, we feel that we will be doing them a pleasing service in giving them a summary of it, short and imperfect as it must be from want of space. After certain preliminary remarks he says:

"The desire of the committee was to determine whether or not the milk derived from tuberculous cows might contain the infectious material of the disease, and in this way become dangerous when used as an article of food. And this question was of necessity to be divided into two parts: (1) Whether this infection, if it existed, was confined to cases in which there was

actual disease of the udder, and (2) whether it might exist in cases in which the udder was apparently or actually healthy, but the disease existed in other parts of the body.

"In regard to the first part of the question plain common sense showed that the danger of infection was a real one, and besides this, there existed at the time sufficient experimental *data* to prove the fact, so that there is very little dispute that, under the circumstances, milk should not be used for food, certainly in an uncooked condition. Evidence since then in the same direction has constantly accumulated, and now there is hardly a dissenting opinion that milk from cows with tuberculosis of the udder should be condemned for food.

"Upon the second point, however, as to whether the milk from cows with tuberculosis, but not of the udder, might be dangerous, there was a great diversity of opinion, and almost no experimental evidence upon which to base what opinion there was. It was in this direction, therefore, that it was especially desirable to

obtain evidence, and after considerable discussion it was decided that the main line of experiment should be so conducted that this point might be decided. In this, as in everything else, it is to be remembered that one piece of positive evidence obtained under proper conditions is worth many negative results, and it is for this reason that so much value may be attached to the results which have been obtained. These were published in an incomplete form and have been widely disseminated. \* \* \* It is unquestionable that they have had much influence in moulding public opinion in this matter, and at least one direct result has been the inspection of the herds of cattle in New York by the Board of Health of that State.

"The work, then, was undertaken with this special end in view—to determine whether the infectious element of tuberculosis ever existed in milk from tuberculous cows whose udders were apparently healthy, and was prosecuted under the following headings: 1. A careful and persistent microscopic examination of the milk from such cattle. 2. Inoculation experiments with such milk. 3. Feeding experiments with the same milk. In addition to these three main lines investigation there was also undertaken: 4. Similar investigations of the milk supply of Boston, and 5. The gathering of as much evidence as possible from medical men and veterinarians as to cases of probable infection through tuberculous milk that had come under their observation."

These investigations were made with extreme carefulness, every precaution being taken to have them as free from doubt as possible.

## I.

"Cover-glass examinations of milk from cows affected with tuberculosis, but, so far as the best veterinary examination could determine, with no disease of the udder."

A summary of the results of this line of

investigation, as given in Table I, is as follows:

"There were 121 examinations of milk and cream made, the specimens coming from 36 different animals. The bacilli of tuberculosis were found in one or more cover-glasses upon 19 different occasions.

"These 19 positive results were obtained from 12 different animals, and the bacilli were found in about equal proportion in the milk and the cream; they were seen more than once in milk from the same cow, at different examinations, 6 times. The bacilli were actually seen, therefore, in specimens from one-third (33 per cent.) of the animals examined. That these animals were actually affected with tuberculosis, and that the udder was free from disease, was proven in all possible cases by careful *post-mortem* examinations. These were conducted upon 20 out of 36 animals shown in Table I.

## II.

"*Inoculation Experiments upon Animals.*"—The animals used were guinea-pigs and rabbits. The results of this work are set forth in detail in Tables II and III and are summarized as follows: "There were 88 guinea-pigs inoculated with milk from 15 different cows; tuberculosis was found in 12, and these results came after the use of milk or cream from 6 different animals. \* \* \* Ninety-five rabbits were used for the same purposes and under the same conditions as were the guinea-pigs. Of these rabbits 5 were for various reasons useless for the purposes of the investigation, leaving 90 which were subjected to full examination. For these 90 animals milk from 19 different cows was used one or more times, and tuberculosis was found in 6 animals inoculated with milk from 4 different cows. These results show a less proportion of apparent infection of milk as demonstrated by the inoculation experiments than appeared to be the case in the microscopic

examinations. But this difference, even granting that they were *all* the results of the inoculations, is no more than might be expected and explained by causes beyond control."

### III.

"The third line of experiment was in feeding the milk from tuberculous cows and healthy udders to different series of animals. Here, again, the greatest precautions were taken against outside infection, and it is believed that these were as free from sources of error as it is ever possible to make such experiments. They were carried on upon rabbits, pigs and calves, and the statement of the experiments is shown in Tables IV, V and VI." Summaries of these tables are as follows:

"*Milk-feeding Experiments upon Rabbits.*—There were used 48 animals, with positive results (tuberculosis) in two, and both of these animals were fed upon milk from cow E; No 12, one nodule in lung after 31 days; No. 28, one nodule in liver after 97 days. This is of course a very small proportion of positive results, but the following table shows a very different condition of affairs, that is especially striking for the reason that pigs are not believed to be unusually susceptible to tuberculosis under ordinary conditions.

"*Milk-feeding Experiments upon Pigs.*—Twelve healthy animals were used with positive results (demonstration of the bacilli under the microscope) in five. In two others nodules presenting the gross appearance of tuberculosis were found, but the material was not saved for microscopic examination. In any case nearly 50 per cent. of the animals were shown to be tuberculous.

"*Milk-feeding Experiments upon Calves.*—For the purposes of the third series of feeding experiments calves were bought as young as possible, and from as healthy parentage as could be found. There were 25 calves used in this series of experiments,

but of these 4 are to be excluded from the count, leaving 21. Of these 21 animals 8, or over 33 per cent., were shown to be tuberculous.

"It is of course true that pigs and calves, that drink milk much more freely than do rabbits, are more susceptible to infection by the gastro-intestinal tract, and that this may explain the far greater proportion of positive results in these two species of animals.

"*Examination of Cows Used for Experiment.*—Twenty-three cows were used for the feeding experiments, and in not one of them did the most careful macroscopic and microscopic search show any sign of tuberculosis of the udder except in one, and in this case a single giant cell, containing one bacillus, was found in one section, and no other indication of tuberculosis anywhere else in the udder.

"An exceedingly interesting piece of evidence as regards the hereditary nature of tuberculosis is found in the history of 19 calves born of the tuberculous cows with healthy udders. Of these 19 calves, all killed within 6 days after birth, not one showed any detectable evidence of tuberculosis, and a most careful search was made in all cases. So that this certainly seems to point away from any very active transmission of tuberculosis from the cow to its offspring.

### IV.

"*Milk Supply of Boston.*—As an interesting corollary to the work already detailed, a series of microscopic examinations and inoculation experiments were made with milk taken at random from the mixed supply of the city of Boston. \* \* \* There were 56 examinations made of the milk and cream from 33 samples, with the result of demonstrating the presence of the bacilli of tuberculosis once. Twenty-five rabbits were inoculated with this mixed milk with the development of tuberculosis in three.

"Of course these results, obtained in

milk from a mixed source are not as conclusive upon the especial point toward which the main line of investigation was directed—as to the presence of the bacilli of tuberculosis in milk from cows with healthy udders—but they certainly tend to demonstrate that there may be this infectious element in any milk supply from un-inspected cattle.”

v.

“The last of the lines in which investigation was made was to endeavor, if possible, to obtain clinical reports of cases of transmission through milk from mother to offspring. \* \* \* A circular was sent out to about 1,800 medical and veterinary gentlemen, in an attempt to discover any clinical cases bearing upon the subject at hand.” To this circular replies were received from 937 physicians, of which 19 were positive as to the transmission and 16 suspicious. “Counting all the positive and suspicious cases together, there are 35, and the percentage of those who have seen cases in which their suspicions have been aroused in this direction is 3.7—a result that is as unexpected as it is surprising in its size, if one takes into consideration the difficulties surrounding the question, and the newness of the subject.” Fifty-four replies were received from veterinarians which gave a percentage of 42.59 *plus*. “Such a percentage is startling in its size until one remembers the greater facilities that veterinarians have for observing such cases and their origin, when it does not seem so much out of the way—granting that milk may be the vehicle for the disease that the experimental evidence offered in this paper tends to show that it is.

“Combining the statistics obtained from the two sources, it appears that there were 991 answers received to the circular-letter that should be counted, and that among these there were 58 gentlemen who have seen, or suspected, the existence of such cases as were inquired about, giving a per-

centage of 5.84 *plus*, which seems to be somewhat remarkable for the reasons already given.”

While the facts above given are extremely interesting, suggestive and valuable, we trust that our readers will not forget the plain, old-fashioned, every-day infectiousness of milk, with which we are all familiar, and which, in our opinion does not receive the attention it deserves. It is needless to say, particularly at this season, that we refer to the dangers arising from fermentative and putrefactive changes due to heat—and uncleanness. Not forgetting tuberculosis, let us bear especially in mind cholera infantum and the other allied complaints which make the parents of every artificially fed baby dread the approach of summer, and impress upon the people, as far as possible, the extreme importance of the greatest care in the management of milk intended for infants.

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**Summary of Reports from County Superintendents of Health for  
March, 1895.**

(EIGHTY-SEVEN COUNTIES REPORTING).

In the blanks on which these reports are made the following items are called for:

1. The number of cases of small-pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.
2. The diseases which have been prevalent in the county and in what parts.
3. Epidemics among domestic animals.
4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. Epidemic of cholera and roup in



poultry in some localities. Sanitary condition of towns not very good.

ALEXANDER—Dr. R. B. Killian, Taylorsville. No sickness. A new jail badly needed; iron cells have been put in old one.

ALLEGHANY—Dr. C. G. Fowlkes, Topia. Mild form of catarrh in all parts. An epidemic of distemper in horses.

ANSON—Dr. E. S. Ashe, Wadesboro. No report.

ASHE—Dr. L. C. Gentry, Jefferson. Some influenza of mild character.

BEAUFORT—Dr. John C. Rodman, Washington. Catarrhal troubles. There are quite a number of swampy places in the county that need drainage.

BERTIE—Dr. H. V. Dunstan, Windsor. Bronchial diseases and pneumonia. Hog cholera in some sections.

BLADEN—Dr. Newton Robinson, Elizabethtown. La grippe in all parts.

BRUNSWICK—Dr. D. I. Watson, Southport. Bronchial troubles. The jail has been condemned by the grand jury. The county home needs some repairs; it is too far—eighteen miles—from the county-seat.

BUXCOMBE—Dr. H. L. Baird, Asheville. Influenza and pneumonia to a slight extent in all parts.

BURKE—Dr. J. L. Laxton, Morganton. Two cases of pneumonia. The well at the jail is not safe; I think on account of too much surface water flowing into it; it is muddy. I have reported it to the authorities. In other respects the sanitary condition of the public buildings is as good as the structure of the old buildings will allow.

CABARRUS—Dr. Leona M. Archey, Concord. Bronchitis, pneumonia and rheumatism in some parts. Reports from five physicians. The sanitary condition of the jail is not as good as it ought to be, on account of the work-house hands being quartered there during bad weather, but will be remedied as soon as the tent is erected.

CALDWELL—Dr. A. A. Kent, Lenoir. Several cases of pneumonia and bronchitis.

A few cases of mumps in one section. A new jail is much needed, and an effort is on foot to have it built.

CAMDEN—No Board of Health.

CARTERET—Dr. George N. Ennett, Beaufort. Broncho-catarrhal troubles in all parts. A few cases of supposed Texas fever among cattle in certain sections. The court-house is dilapidated in the third story, and the jail is an old and wrecked affair; we need a new one.

CASWELL—Dr. W. O. Spencer, Yanceyville. No sickness throughout the county that I have heard of. The sanitary condition of the jail is about as good as its construction will allow.

CATAWBA—Dr. J. M. McCorkle, Newton. No diseases reported.

CHATHAM—Dr. L. A. Hanks, Pittsboro. Pneumonia to a limited extent. Bronchial affections. The health of the inmates of the county home forcibly illustrates what can be accomplished by proper hygienic methods.

CHEROKEE—Dr. J. F. Abernathy, Murphy. General public and inmates of county buildings healthy.

CHOWAN—Dr. R. H. Winborne, Rockahock. A few cases of rheumatism, pneumonia and mumps. Some hydrophobia in dogs and cholera in swine.

CLAY—Dr. W. E. Sanderson, Hayesville. Very little sickness. There are some efforts to improve the condition of the jail. A new one is badly needed.

CLEVELAND—Dr. O. P. Gardner, Shelby. No disease to report.

COLUMBUS—Dr. I. Jackson, Whiteville. Two cases of typhoid fever. Bronchial diseases and pneumonia to a greater extent than usual. Hog cholera remains in only a few localities.

Craven—Dr. Leinster Duffy, Newbern. Catarrhal troubles, influenza and whooping-cough.

CUMBERLAND—Dr. J. H. Marsh, Fayetteville. Influenza in many parts.

CURRITUCK—No Board of Health.

DARE—Dr. W. H. Peterson, Manteo. Little sickness.

DAVIDSON—Dr. R. L. Payne, Lexington. Whooping-cough and mumps. The sanitary condition of the public buildings is as good as the structures will allow.

DAVIE—Dr. James McGuire, Mocksville. Very little sickness. The sanitary condition of the public buildings is as good as the structures will allow.

DUPLIN—Dr. W. P. Kennedy, Warsaw. Influenza and pneumonia in most parts. There is insufficient drainage in some sections. The jail is clean and when completed will be a good building. The houses at the home need repairs and whitewashing. They are all clean.

DURHAM—Dr. J. M. Manning, Durham. Catarrhal and intermittent fevers in all parts. Some cases of influenza among domestic animals. At the county home a very nice building has just been completed for the accommodation of the insane who cannot be provided for by the State Hospitals.

EDGECOMBE—Dr. Donald Williams, Tarboro. A few cases of bronchitis.

FORSYTH—Dr. D. N. Dalton, Winston. Several mild cases of grip and a very few of pneumonia.

FRANKLIN—Dr. E. S. Foster, Louisburg. One or two cases of typhoid fever and a few of whooping cough of mild type and of pneumonia.

GASTON—Dr. J. H. Jenkins, Dallas. Colds and two or three cases of pneumonia. A few cases of mild scarlatina reported; proper quarantine precautions were taken.

GATES—Dr. I. W. Costen, Gatesville. No diseases reported.

GRAHAM—No Board of Health.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. La grippe with complications in most parts. A few rooms at the county home are to be renovated.

GREENE—Dr. E. H. Sugg, Snow Hill. No report.

GUILFORD—Dr. A. R. Wilson, Greensboro. One case of typhoid fever. The jail is a disgrace to a county like Guilford. The work-house is much too crowded.

HALIFAX—Dr. I. E. Green, Weldon. Little sickness in any part.

HARNETT—Dr. J. F. McKay, Dickinson. Four cases of scarlatina. Influenza and pneumonia in nearly all parts.

HAYWOOD—Dr. J. Howell Way, Waynesville. No contagious diseases reported. Inside walls of jail recently whitewashed. The building is new.

HENDERSON—Dr. J. L. Egerton, Hendersonville. No disease to report.

HEMTON—Dr. John W. Tayloe, Union. One case each of typhoid fever, pernicious and hemorrhagic malarial fever. Some bronchial troubles and pneumonia in my section. I have pleaded time and again with our physicians, but cannot get them to let me have their reports in time. Only one report this month.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. The sanitary condition of the inside of the jail is fair, but the yard is used as a horse, cow and hog lot, and is filthy. The condition of the work-house and county home is as good as the structure will allow.

JACKSON—Dr. W. F. Tompkins, Webster. No diseases to report. The jail is new.

JOHNSTON—Dr. R. J. Noble, Selma. One case of hemorrhagic malarial fever. Whooping-cough in all parts. The jail needs sewerage.

JONES—Dr. R. A. Whitaker, Trenton. Influenza in all parts and quite a number of cases of pneumonia. The county home is constructed of logs, and consequently the buildings are not as comfortable as they should be, but they are good of their kind. I have suggested the erection of new ones, but the Commissioners are always slow to act.

LENOIR—Dr. C. B. Woodley, Kinston. No report.

LINCOLN—Dr. W. L. Crouse, Lincolnton. Whooping-cough in some parts; ten cases reported.

MACON—Dr. S. H. Lyle, Franklin. Very little sickness, principally local inflammations, the sequelæ of influenza.

MADISON—Dr. James K. Hardwicke, Marshall. Seventy-five cases of measles. Some influenza and pneumonia still. The jail is frequently overcrowded, sometimes dangerously so.

MARTIN—Dr. W. H. Harrell, Williamston. One case of hemorrhagic malarial fever. A mild form of catarrhal fever or la grippe very generally prevails.

MCDOWELL—Dr. B. A. Cheek, Marion. Catarrhal troubles in different parts. Very healthy. The jail was burned last November.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. Whooping-cough in Charlotte and other parts. Three cases of scarlatina at the Atherton cotton mills. Proper sanitary police restrictions have been observed.

MITCHELL—Dr. C. E. Smith, Bakersville. Mumps in western part. Some la grippe, not of long duration, but severe. The inmates of the county home have been moved, and a new man now has charge of them. I find the home and inmates in better condition than for ten years.

MONTGOMERY—Dr. W. A. Simmons, Troy. No disease to report. "The Legislature did right in taxing us \$10 apiece a year for trying to prevent sickness and cure all kinds of sickness as soon as we are notified of their appearance in our State."

MOORE—Dr. Gilbert McLeod, Carthage. Whooping-cough in north-western and western parts. Influenza in all parts, especially in Carthage. Some bronchitis and pneumonia.

NASH—Dr. J. J. Mann, Nashville. Very little sickness.

NEW HANOVER—Dr. R. D. Jewett, Wil-

mington. Some grip and a few cases of pneumonia. Two cases of diphtheria, in each of which quarantine regulations were carried out.

NORTHAMPTON—Dr. H. W. Lewis, Jackson. Very little sickness.

ONTSLOW—Dr. E. L. Cox, Jacksonville. Malarial fever, la grippe and pneumonia.

ORANGE—Dr. C. D. Jones, Hillsboro. Catarrhal troubles and one case of pneumonia.

PAMLICO—No Board of Health.

PASQUOTANK—Dr. W. W. Griggs, Elizabeth city. A few cases of bronchitis and pneumonia.

PENDER—Dr. George F. Lucas, Currie. Grippe to a moderate extent.

PERQUIMANS—Dr. John F. Speight, Hertford. One case of diphtheria and two of hemorrhagic malarial fever. La grippe, bronchitis and pneumonia.

PERSON—Dr. C. G. Nichols, Roxboro. Three cases of whooping-cough and some bronchitis and pneumonia. Pneumonia in horses.

PITT—Dr. W. H. Bagwell, Greenville. Thirteen cases of whooping-cough, five of scarlatina and one of hemorrhagic malarial fever. Some bronchitis and pneumonia.

POLK—Dr. O. S. Missildine, Tryon. No diseases to report. There is no way of keeping the prisoners in the jail warm.

RANDOLPH—Dr. J. M. Boyette, Ashboro. Stomatitis, bronchial troubles and dysentery to some extent.

RICHMOND—Dr. J. M. Covington, Rockingham. Influenza, bronchitis, pneumonia and mumps to some extent in all parts.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. No diseases reported.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. Three cases of typhoid fever. An epidemic of cholera in chickens.

ROWAN—Dr. John Whitehead, Salisbury. Catarrhal affections and pneumonia in most parts.

RUTHERFORD—Dr. W. A. Thompson,

Rutherfordton. No diseases to report. There is some complaint of vermin in the jail, but the keeper says he will give it a thorough renovation.

SAMPSON—Dr. John A. Stevens, Clinton. A few cases of influenza, pneumonia, pleurisy and intermittent fever. Hog cholera.

STANLY—Dr. D. P. Whitley, Millingport. Some catarrhal fever, pleurisy and pneumonia.

STOKES—Dr. W. L. McCanless, Danbury. Whooping-cough in all parts.

SURRY—Dr. J. B. Hollingsworth, Mt. Airy. La grippe and pneumonia in all parts.

SWAIN—Dr. R. L. Davis, Bryson City. One case of typhoid fever and a few cases of pneumonia of mild form.

TRANSYLVANIA—Dr. C. W. Hunt, Brevard. Very little sickness. Catarrhal diseases in moderate degree.

TYRRELL—Dr. Ab. Alexander, Columbia. No sickness of importance. We have had no prisoners in jail for some months nor any in the county home for over twelve months and the County Commissioners have rented the latter out for a private dwelling.

UNION—Dr. J. E. Ashcraft, Monroe. Two cases of scarlatina and one of typhoid fever. Some catarrhal fever and pneumonia in town and county.

VANCE—Dr. W. T. Cheatham, Henderson. Five cases of typhoid fever.

WAKE—Dr. P. E. Hines, Raleigh. A mild epidemic of whooping-cough around Myatt's Mill. Colds, influenza, pneumonia and rheumatism in all parts. Dr. Kirby reports malarial fever prevailing at the Insane Asylum due to the water-works pond. At the work-house there is not sufficient light. The superintendent and County Commissioners have had their attention called to it for two months. Fifty-one blanks and circulars were sent out and eight reports received.

WARREN—Dr. J. P. Macon, Warrenton.

La grippe almost epidemic throughout the county. Catarrhal fever and pneumonia. Distemper among horses.

WASHINGTON—No Board of Health.

WATAUGA—Dr. W. B. Councill, Boone. No sickness of any kind.

WAYNE—Dr. W. J. Jones, Jr., Goldsboro. Ten cases of whooping-cough. Catarrhal troubles in all parts. The jail is crowded at present.

WILKES—Dr. J. W. White, Wilkesboro. Influenza and pneumonia in many parts.

WILSON—Dr. Albert Anderson, Wilson. La grippe in all parts. A few cases of pneumonia and one of typhoid fever. The jail is overcrowded at present.

YADKIN—Dr. T. R. Harding, Yadkinville. No disease of any note.

YANCEY—Dr. J. L. Ray, Burnsville. Mumps to some extent. Some typhoid fever heard of. I cannot get the Commissioners to have the jail cleaned up. The county home is in a little better condition than it was a month ago, but there is some room for improvement yet.

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#### Review of Diseases for March, 1895.

BRONCHITIS—From Bertie, Brunswick, Cabarrus, Caldwell, Carteret, Chatham, Columbus, Durham, Edgecombe, Hertford, Moore, Pasquotank, Perquimans and Richmond—14 counties.

CHOLERA, IN CHICKENS—From Alamance and Rockingham.

CHOLERA, IN HOGS—From Bertie, Chowan, Columbus and Sampson.

DIPHTHERIA—From New Hanover and Perquimans.

DISTEMPER, IN HORSES—From Alleghany.

INFLUENZA—From Ashe, Bladen, Buncombe, Craven, Cumberland, Duplin, Forsyth, Granville, Harnett, Jones, Macon, Madison, Mitchell, Moore, New Hanover, Onslow, Pender, Perquimans, Richmond, Sampson, Surry, Wake, Warren, Wilkes and Wilson—25 counties.

MALARIAL FEVER—From Durham, Onslow, Sampson and Wake.

MALARIAL FEVER, HEMORRHAGIC—From Hertford, Johnston, Martin, Perquimans and Pitt.

MALARIAL FEVER, PERNICIOUS—From Hertford.

MEASLES—From Madison.

MUMPS—From Caldwell, Chowan, Davidson, Mitchell, Richmond and Yancey—6 counties.

PLEURISY—From Sampson.

PNEUMONIA—From Bertie, Buncombe, Burke, Cabarrus, Caldwell, Chatham, Chowan, Columbus, Duplin, Forsyth, Franklin, Gaston, Harnett, Hertford, Jones, Madison, Moore, New Hanover, Onslow, Orange, Pasquotank, Perquimans, Person, Richmond, Rowan,\* Sampson, Stanly, Surry, Swain, Union, Warren, Wilkes and Wilson—33 counties.

PNEUMONIA, IN HORSES—From Person.

RABIES, IN DOGS—From Chowan.

RHEUMATISM—From Cabarrus, Chowan and Wake.

ROUP, IN CHICKENS—From Alamance.

SCARLATINA—From Gaston, Harnett, Mecklenburg, Pitt and Union.

TEXAS FEVER (?), IN CATTLE—From Carteret.

TYPHOID FEVER—From Columbus, Franklin, Guilford, Hertford, Rockingham, Swain, Union, Vance, Wilson and Yancey—10 counties.

WHOPING-COUGH—From Craven, Davidson, Franklin, Johnston, Lincoln, Mecklenburg, Moore, Person, Pitt, Stokes, Wake and Wayne—12 counties.

### Summary of Mortuary Reports for March, 1895.

(TWENTY-NINE TOWNS).

	White.	Col'd.	Total.
Aggregate population .....	77,675	47,429	125,104
Aggregate deaths.....	70	65	135
Representing annual death-rate per 1,000.....	10.8	16.4	12.5
<i>Causes of death.</i>			
Typhoid Fever.....	1	0	1
Malarial Fever.....	1	1	2
Pneumonia ....	12	6	18
Consumption .....	12	15	27
Brain diseases.....	8	2	10
Heart diseases.....	4	2	6
Neurotic diseases .....	3	2	5
Diarrhœal diseases.....	3	1	4
All other diseases.....	25	32	57
Accident.....	1	4	5
	70	65	135
Deaths under 5 years .....	10	14	24
Still-born .....	2	5	7

## Condition of Jails and County Homes by Counties for March, 1895.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates in.	Space allotted each. (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance .....	good	22 (a)	.....	.....	.....	good	36	.....	.....	.....
Alexander.....	†	1	.....	.....	.....	good	12	.....	.....	.....
Alleghany.....	good	0	.....	.....	.....	not good	4	.....	.....	.....
Anson .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ash.....	good	1	.....	.....	.....	good	7	.....	.....	.....
Beaufort .....	fairly good	6	.....	.....	.....	fairly good	15	.....	.....	.....
Bertie.....	very good	13	.....	.....	.....	good	19	.....	.....	.....
Bladen .....	fair	4	.....	.....	.....	fair	9	.....	.....	.....
Brunswick ...	†	3	*	0	3	†	10	1000	0	1
Buncombe.....	good	77 (b)	930 (c)	22	44	good	32	450-900	18	11
Burke.....	fair†	10	.....	.....	.....	fair†	15	.....	.....	.....
Cabarrus.....	not good†	33 (d)	* (e)	3	11	good	24	*	.....	.....
Caldwell .....	†	7	900	0	7	fair	2	*	0	1
Camden .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carteret.....	fair†	1	1000	0	1	.....	0	.....	.....	.....
Caswell .....	fair†	5 (f)	.....	.....	.....	very good	22	.....	.....	.....
Catawba.....	very good	6	.....	.....	.....	very good	35	.....	.....	.....
Chatham.....	very good	9 (g)	*	2	3	very good	.....	*	10	10
Cherokee.....	fine	.....	.....	.....	.....	fine	.....	.....	.....	.....
Chowan .....	good	.....	.....	.....	.....	good	.....	.....	.....	.....
Clay .....	†	3	.....	.....	.....	.....	0	.....	.....	.....
Cleveland.....	good	16	.....	.....	.....	good	26	.....	.....	.....
Columbus.....	good	6	*	.....	.....	good	10	*	.....	.....
Craven.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cumberland..	good	.....	.....	.....	.....	good	.....	.....	.....	.....
Currituck.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dare .....	good	.....	.....	.....	.....	good	.....	.....	.....	.....
Davidson .....	fair†	2	*	0	2	fair†	28	721	0	3
Davie .....	fair†	5	.....	0	3	fair†	7	.....	1	0
Duplin .....	good†	0	.....	.....	.....	good†	13	1000	3	4
Durham .....	good	42 (h)	* (i)	.....	.....	good†	27	*	.....	.....
Edgecombe...	fair	11	*	3	4	fair	25	*	2	5
Forsyth .....	good	22	*	8	6	good	29	*	8	4

\* Space exceeds 1,000 cubic feet. (a) All in House of Correction. (b) Includes 59 in House of Correction. (c) For House of Correction 225 to 300. (e) For House of Correction 500. (f) Includes 1 in House of Correction. (g) Includes 8 in House of Correction. (h) Includes 23 in House of Correction. (i) In House of Correction 495. † See Summary of Reports from Superintendents.

Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number Inmates in.	Space allotted each. (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	very good	7	*	.....	.....	very good	26	*	.....	2
Gaston.....	well kept	.....	.....	.....	.....	well kept	.....	.....	.....	.....
Gates.....	good	2	.....	.....	.....	good	9	.....	.....	.....
Graham.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Granville ....	good	3	550	0	0	good†	28	600	6	7
Greene.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guilford.....	very bad†	46 (a)	604†	.....	.....	good	32	*	.....	.....
Halifax.....	good	10	1000	4	4	good	52	700	4	7
Harnett.....	good	0	.....	.....	.....	.....	0	.....	.....	.....
Haywood.....	good†	19	.....	0	11	good	11	.....	.....	.....
Henderson ..	good	2	.....	.....	.....	good	3	.....	.....	.....
Hertford.....	fair	2	*	0	0	fair	7	*	1	2
Hyde.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iredell. ....	†	36 (b)	500+	.....	2	fair†	22	500+	.....	.....
Jackson.....	good†	3	.....	0	3	good	1	.....	0	0
Johnston .....	fair†	0	.....	.....	.....	good	12	*	.....	.....
Jones.....	good	1	*	1	1	fair†	3	*	2	2
Lenoir.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lincoln.....	well kept	5	*	.....	.....	well kept	28	350	.....	.....
McDowell ....	†	0	.....	.....	.....	good	13	.....	0	1
Macon.....	good	0	*	.....	.....	good	10	*	2	4
Madison.....	very bad†	20	.....	.....	.....	good	18	.....	.....	.....
Martin.....	good	5	*	0	2	good	15	1000	5	2
Mecklenburg	good	96 (c)	* (d)	.....	.....	.....	77	*	.....	.....
Mitchell.....	fair	8	.....	.....	.....	very good	10	.....	.....	.....
Montgomery,	good	6	500	.....	.....	good	14	600	.....	.....
Moore.....	good	4	*	0	2	good	7	*	2	3
Nash.....	good	2	600	1	2	good	28	1000	5	8
New Hanover	good	.....	.....	.....	.....	good	.....	.....	.....	.....
Northampton	good	5	.....	.....	.....	good	28	.....	.....	.....
Onslow.....	fair	2	.....	.....	.....	fair	3	.....	.....	.....
Orange.....	fair	1	*	.....	.....	good	18	*	.....	.....
Pamlico.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* Space exceeds 1,000 cubic feet. (a) Includes 28 in House of Correction. (b) Includes 28 in House of Correction. (c) Includes 78 in House of Correction. (d) For House of Correction 700. † See Summary of Reports of Superintendents.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number Inmates in.	Space allotted each, (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank...	fair	4	*			fair	24	*		
Pender .....	good	1		0	0	good	7		0	0
Perquimans..	good	0				good	8			
Person.....	bad	2	1000		1	good	14	1000		3
Pitt.....	very good	14	500-750	1	2	very good	28	1000	2	0
Polk .....	poor†	5	*	0	1	good				
Randolph.....	good	7				good	28			
Richmond....	good	18		2	4	good	22		0	2
Robeson.....	good	18				good	14			
Rockingham,	good	8	*			good	42	500-700	19	
Rowan . .....	good	14	500	6	5	fair	24	800†	7	5
Rutherford ..	fair†	14	700			fair	15	700		
Sampson.....	very good	6				very good	17			
Stanly.....	good	1		0	1	good	9		0	1
Stokes .....	good	6	700	2	3	good	12	600	3	5
Surry .....	good	8	720	0	2	good	19	700	0	3
Swain.....	good	6				good	6			
Transylvania,	good	7				good	4			
Tyrrell.....	†	0				†	0			
Union .....	good	14				good	24			
Vance .....	good	8	*	3	3	good	12	*	2	2
Wake .....	very good†	87 (a)				very good	65			
Warren .....	very good		*			very good	18	*		
Washington..										
Watauga.....	very good	2				very good	7			
Wayne .....	not good†	26			6	good	10			
Wilkes .....	fair	12				fair	10			
Wilson .....	not good†	14	*			good	28	*		
Yadkin .....	good	6				good	23			
Yancey.....	filthy†	2	*	1	1	fair†	3			

\* Space exceeds 1,000 cubic feet. (a) Includes 79 in House of Correction. † See Summary of Reports of Superintendents.



Mortuary Report for March, 1895.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrheal Diseases.	All Other Diseases.	Accident.	Suicide.	Violence.	TOTAL DEATHS.		Deaths under 5 years. Still-born.	
		By Races.	Total.	By Races.	Total.																	By Races.	By Towns.		
Asheville..... } Dr. H. L. Baird. }	White. Colored.	8,000 4,000	12,000	19.5 6.0	15.0	..	..	..	..	..	..	2	4	..	..	1	4	..	..	..	..	13	15	..	..
Charlotte..... } Fred. Nash, Esq. }	White. Colored.	9,000 6,000	15,000	10.7 6.0	8.8	..	..	..	..	..	..	1	1	4	..	..	..	3	..	..	..	8	11	..	..
Durham..... } Dr. J. M. Manning. }	White. Colored.	4,500 3,500	8,000	2.7 0.0	1.5	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..
Fayetteville..... } Dr. J. H. Marsh. }	White. Colored.	2,800 2,200	5,000	17.1 27.3	21.6	..	..	..	..	..	..	2	1	1	..	..	..	2	3	..	..	4	9	..	..
Goldsboro..... } T. H. Bain, Esq. }	White. Colored.	3,500 1,500	5,000	6.7 8.0	7.2	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	2	3	..	..
Greensboro..... } Dr. A. R. Wilson. }	White. Colored.	5,500 2,500	8,000	6.5 24.0	12.0	..	..	..	..	..	..	1	..	..	..	..	1	2	2	..	..	3	8	1	4
Henderson..... } Dr. W. J. Judd. }	White. Colored.	2,250 2,000	4,250	0.0 18.0	8.4	..	..	..	..	..	..	1	..	..	..	..	..	2	..	..	..	0	3	..	..
Hillsboro..... } Dr. C. D. Jones. }	White. Colored.	400 300	700	0.0 0.0	0.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	0	..	..
Jacksonville..... } Dr. E. L. Cox. }	White. Colored.	450 250	700	26.7 0.0	17.1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	0	1	..
Lenoir..... } Dr. A. A. Kent. }	White. Colored.	800 200	1,000	0.0 0.0	0.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	0	..	..
Lexington..... } Dr. R. L. Payne. }	White. Colored.	1,800 300	2,100	6.7 0.0	5.7	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	0	1	..
Marion..... } Dr. B. A. Cheek. }	White. Colored.	650 150	800	0.0 80.0	15.0	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	0	1	..	..
Monroe..... } Dr. J. M. Blair. }	White. Colored.	1,800 600	2,400	13.3 40.0	20.0	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	2	4	..	..
Oxford..... } Dr. W. O. Baskerville. }	White. Colored.	1,500 1,300	2,800	8.0 9.2	8.6	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	1	2	..	..
Pittsboro..... } Dr. L. A. Hanks. }	White. Colored.	350 250	600	0.0 0.0	0.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	0	..	..
Raleigh..... } Dr. James McKee. }	White. Colored.	8,000 7,000	15,000	19.5 25.7	22.4	..	1	..	..	..	..	1	4	2	..	..	1	7	1	..	..	13	28	5	..
Rockingham..... } Dr. J. M. Covington. }	White. Colored.	1,300 450	1,750	18.5 0.0	13.1	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	2	2	1	..
Rocky Mount..... } Dr. G. L. Wimberley. }	White. Colored.	1,200 400	1,600	10.0 30.0	15.0	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	2	..	..
Salem..... } F. E. Keelin, Esq. }	White. Colored.	3,942 342	4,284	18.3 70.2	22.4	..	..	..	..	..	..	1	2	1	..	..	1	..	..	..	..	6	8	3	..
Salisbury..... } Dr. John Whitehead. }	White. Colored.	3,500 1,500	5,000	3.4 16.0	7.2	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..	..	1	3	..	..
Scotland Neck..... } Mayor J. A. Perry. }	White. Colored.	700 400	1,100	0.0 0.0	0.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	0	..	..
Southport..... } L. A. Galloway, Esq. }	White. Colored.	750 450	1,200	16.0 0.0	10.0	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	0	..	..
Statesville..... } Dr. W. J. Hill. }	White. Colored.	2,000 500	2,500	6.0 0.0	4.8	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	0	..	..
Tarboro..... } Dr. Donald Williams. }	White. Colored.	1,258 1,112	2,370	9.5 21.6	15.2	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	..	1	2	3	..
Warrenton..... } Dr. P. J. Macon. }	White. Colored.	850 650	1,500	0.0 36.9	16.0	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	0	2	..	..
Washington..... } Dr. J. C. Rodman. }	White. Colored.	3,000 2,500	5,500	8.0 4.8	6.5	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	2	3	..	..
Weldon..... } Mayor J. T. Gooch. }	White. Colored.	675 775	1,450	0.0 46.4	24.8	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	..	0	3	..	..
Wilson..... } Dr. Albert Anderson. }	White. Colored.	2,000 1,500	3,500	12.0 40.0	24.0	..	1	..	..	..	..	1	..	..	..	..	..	5	..	..	..	2	7	1	..
Winston..... } Dr. John Bynum. }	White. Colored.	5,200 4,800	10,000	9.2 22.5	15.6	..	..	..	..	..	..	1	1	..	1	1	1	1	2	..	..	4	13	..	..

### Meteorological Summary for North Carolina, March, 1895.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fabr.).								Mean Rel. Humidity.	Total Precipitation.	No. OF DAYS.				Prevailing Wind.	
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.			Mean Daily Range.	Clear.	Partly Cloudy.	Cloudy.		Rainy.
Asheville .....	45.2	80	29	56.2	19	9	34.2	61	22.0	58.7	3.95	17	1	13	8	N.
Bakersville.....	42.2	80	30	56.6	17	6	27.7	63	28.9	.....	4.17	.....	.....	.....	6	.....
Blowing Rock.....	34.2	55	28	41.7	10	17	26.0	45	15.1	.....	.....	.....	.....	.....	.....	N. W.
Charlotte.....	49.2	84	30	58.5	25	17	39.9	59	18.6	70.0	5.52	10	8	13	11	S. W.
Chapel Hill.....	48.4	85	30	59.2	24	16	37.7	61	21.5	.....	5.12	14	8	9	11	S. W.
Horse Cove.....	44.8	77	30	54.5	17	17	35.1	60	19.4	.....	7.30	13	9	9	15	N. W.
Littleton .....	47.2	77	29	58.2	23	17	36.2	54	22.0	.....	4.63	10	5	16	10	N. W.
Lenoir .....	46.1	73	30	54.6	24	6	37.7	54	16.9	.....	4.52	10	8	13	10	S. W.
Louisburg.....	48.1	85	30	59.4	24	23	36.8	61	22.6	.....	4.85	.....	.....	.....	9	.....
Mt. Airy.....	44.6	83	30	56.4	20	6	32.9	63	23.5	.....	4.75	12	7	12	9	S. W.
Mt. Pleasant.....	48.8	84	30	59.7	23	17	37.9	61	21.8	.....	5.82	11	4	16	12	S. W.
Marion.....	49.2	85	30	62.2	22	6	36.3	63	25.9	.....	5.00	17	5	9	8	.....
Newbern .....	53.4	86	29	65.0	29	17	41.7	57	23.3	.....	5.10	.....	.....	.....	12	.....
Oak Ridge.....	47.0	83	30	57.9	20	17	36.1	63	21.8	.....	4.83	19	5	7	13	W.
Pittsboro.....	46.4	82	30	55.2	24	17	37.6	58	17.6	.....	4.80	8	11	12	8	S. W.
Raleigh.....	50.5	82	30	58.8	25	17	41.9	57	16.9	.....	5.45	16	7	8	11	W.
Rockingham.....	52.8	85	29	66.3	25	17	39.3	63	27.0	.....	6.77	16	4	11	8	.....
Roxboro.....	47.4	83	30	58.2	22	17	36.7	61	21.5	.....	4.57	11	6	14	11	.....
Soapstone Mount.....	47.0	85	30	59.9	20	17	34.0	65	25.9	.....	4.86	7	15	9	10	S. W.
Saxon.....	46.7	86	30	58.8	20	16	34.6	66	24.2	.....	4.00	7	13	11	10	S. W.
Southern Pines.....	51.6	86	30	60.7	25	17	42.5	61	18.2	78.9	8.78	17	2	12	11	W.
Salisbury.....	50.5	79	30	58.8	30	23	42.2	49	16.6	.....	5.40	.....	.....	.....	11	.....
Southport.....	52.2	72	26	60.2	29	17	44.3	43	15.9	.....	4.47	12	8	11	11	S. W.
Willeyton.....	48.0	82	30	59.2	26	17	36.7	56	22.5	.....	4.93	4	15	12	12	S.
Weldon.....	48.0	84	30	58.5	26	23	37.6	58	20.9	.....	5.19	12	9	10	13	S.
Wilmington.....	53.4	82	30	61.0	29	17	44.8	53	17.1	84.7	2.94	14	6	11	12	S. W.

#### STATE METEOROLOGICAL SUMMARY FOR MARCH, 1895.

Mean barometer, 30.08 inches; normal for March, 30.05. Highest barometer, 30.54 on the 23d, at Raleigh.

Lowest barometer, 29.49 on the 20th, at Hatteras.

Mean temperature, 48.1 degrees; normal for March, 48.0. Highest temperature, 88 on the 30th at Falkland.

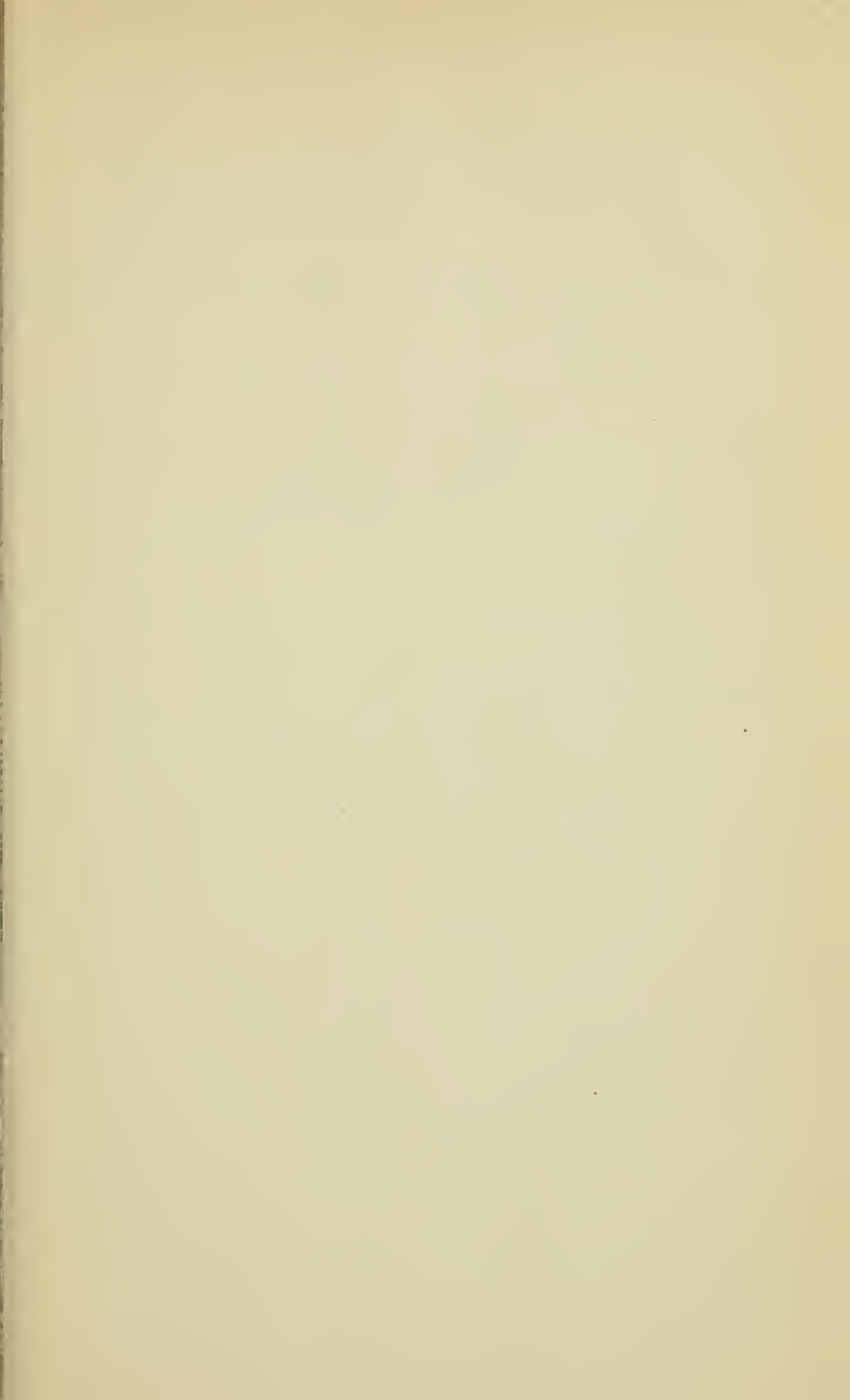
Lowest temperature, 10 on the 17th at Blowing Rock.

Average rain-fall, 5.27 inches; normal for March, 4.90 inches. Greatest monthly rain-fall, 8.78 inches at Southern Pines. Least monthly rain-fall, 2.43 inches at Morganton.

Average number of clear days, 12; partly cloudy, 8; cloudy, 11; rainy, 11.

Prevailing wind direction, south-west; average velocity, 9.9 miles per hour. Normal direction for March,

south-west. Normal velocity, 9.5 miles per hour.





# BULLETIN

OF THE

## NORTH CAROLINA BOARD OF HEALTH.

Published Monthly at the Office of the Secretary of the Board, at Raleigh, N. C.

### SUBSCRIPTION, 25 CENTS A YEAR.

GEORGE GILLET THOMAS, M. D., <i>Pres.</i> , Wilmington.	W. P. BEALL, M. D.....Greensboro.
SAMUEL BATTLE, M. D.....Asheville.	W. J. LUMSDEN, M. D..... Elizabeth City.
W. H. HARRELL, M. D.....Williamston.	PROF. F. P. VENABLE.....Chapel Hill.
JOHN WHITEHEAD, M. D.....Salisbury.	J. C. CHASE, CIV. ENG.....Wilmington.
RICHARD H. LEWIS, M. D., <i>Secretary and Treasurer</i> , Raleigh.	

VOL. X.

MAY, 1895.

No. 2.

#### Annual Meeting of the Board of Health.

This meeting was held "on the second day of the annual meeting of the Medical Society of the State of North Carolina," and therefore took place in the city of Goldsboro on Wednesday, the 15th instant. Owing to unavoidable circumstances the attendance was small.

The members of the Board for the next two years are: Dr. W. H. Harrell and John Whitehead re-elected by the State Medical Society; Prof. F. P. Venable, Ph. D., Mr. J. C. Chase and Drs. W. P. Beall and R. H. Lewis, re-appointed, and Dr. W. J. Lumsden, appointed by His Excellency Governor Carr to succeed Dr. W. H. G. Lucas, who, on account of ill health, has been unable to attend the meetings.

Dr. George Gillett Thomas was unanimously re-elected President. The Secretary, whose term of office when elected was six years, held over under the decision of the Attorney General given at the annual meeting in Raleigh in 1893.

Upon the statement of the Secretary that the first edition of 10,000 of the pamphlets

on Prevention of Tuberculosis, Drinking Water and Malaria, and Instructions for Quarantine and Disinfection was nearly exhausted, and that the applications for them already reached into the thousands, he was authorized to have printed as many more as in his judgment could be used to advantage. He was also authorized to have printed in similar form and number for distribution with those mentioned the excellent paper on "The Importance of Disinfecting the Bowel Discharges in Typhoid Fever," read before the Salisbury Health Conference by Dr. A. R. Wilson, Superintendent of Health of Guilford county.

Washington was selected as the place for the next Health Conference with the people on a day in October to be named by the President.

Arrangements were made to have the bacteriological work relating to sanitation done in our own State. This matter will be referred to more at length in a future issue.

*The Conjoint Session* with the State Medical Society was taken up with the re-election of Drs. Harrell and Whitehead, who

had no opposition, the annual report of the Secretary, and with a general discussion of the relationship between malaria and drinking water. A paper on this subject was prepared for the session by Dr. West, of Weldon, but owing to a misunderstanding was not read. It will, however, appear in the Transactions.

Heretofore when the President of the Society has announced "the hour for the conjoint session has arrived" there has promptly occurred a large and disheartening exodus of members; but on this occasion, while not a great many were in the hall, practically none left. We are encouraged to believe from this and other signs that interest in sanitary matters is on the increase in the profession. We know it is among the people. We trust that it may continue to grow until it pervades the entire body politic.

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#### Drinking Water and Malaria Once More.

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We have just received from Dr. R. A. Whitaker, Superintendent of Health of Jones county, a letter which he wrote nearly a year ago in reply to our circular-letter asking for testimony on the relation between drinking water and malarial diseases, but accidentally overlooked and did not send. We regret very much that we did not get it in time to incorporate it in the first edition of our pamphlet on that subject. It will, however, appear in the second edition, which is about to go to press. It is so striking and so convincing that we feel that no apology for its publication in the BULLETIN is needed.

DR. WHITAKER'S LETTER.

TRENTON, N. C., June 22, 1894.

RICHARD H. LEWIS, M. D.,

Raleigh, N. C.

DEAR DOCTOR:—Some weeks ago a letter was received from you asking me for

facts, or my ideas or experience in regard to malaria in connection with drinking water. In the outset I will say: Four years ago my faith in the old theory of breathing malaria into the system was terribly shaken and subsequent experience has taught me that not through the atmosphere alone are germs taken into the human economy, but through other channels do they enter our systems and do their deadly work. To fully appreciate what I shall say in this connection it will be necessary for me to give you an idea of the location of our village. Trenton is situated on the south bank of Trent River, which stream, in its general course, runs from west to east. Just south of the village is Crooked Run, which flows into the river a half mile below the town and is parallel with the river for a mile above. On this latter stream is situated a mill far enough down to throw the pond, which is a large one, covering over two hundred acres of land, directly south of us. So you see our village is surrounded on all sides with water except to the west, and at this point the pond and river approach within three hundred yards of each other. This peninsula or narrow neck of land on which our village is located is a ridge, and our water is as good, if not better, than most of the water in this eastern section. When the river and pond are low the drainage of our town is almost perfect and no surface water ever contaminates our wells. All of our wells are from 18 to 30 feet deep, and the water in them is cool and good with one exception. In midsummer if a thermometer is placed in the water when first drawn it will drop to 60°, and in some of the wells the water is cooler than this temperature. I said with one exception all of our water was good. This exception is a well which is on the public street at the foot of a hill leading to a bridge across the river. The water in this well is cool, but surface water enters it, especially during rainy spells. In this neighborhood per-

sous using water from this well have chills more or less every year and at all seasons of the year. With this exception the rest of the citizens of this village are exempt from malarial troubles, unless during a prolonged rainy season when the other wells are to a certain extent contaminated with surface water, or they contract malaria while hunting or fishing by drinking spring, branch or river water. So much for the situation of our village and our water. Now for the theory of breathing in malarial poison and why my faith in said theory has been almost destroyed. Four years ago last March this mill which has been mentioned was washed out, the water ran out of the pond, leaving stagnant pools all over it, and the stench from the exposed mud and decayed vegetation was awful. To make matters worse the south winds (for the pond is directly south of us and some of the people live right on the edge of the pond) brought this foul odor into our village, and some nights when the winds were from the south the stench was hardly bearable. The pond remained in this condition all summer till fall, when the mill was replaced and the water again covered this foul mud and decaying vegetable matter—a hot-bed for malaria, so to speak. Realizing the situation, I predicted that everybody would be sick, and I thought I could prophesy with absolute certainty in this instance, but strange to say we had no more chills than usual; in fact, we were almost exempt from malarial troubles. This set me to thinking and gave the theories laid down in our text-books as to how the malarial poison is contracted a terrible shaking. Last August all the water was allowed to run out of this pond in order that some repairs might be made to the dam. Again through the latter part of August and the month of September we had the same conditions as described above, only intensified, for in the former instance the pond was emptied early in the spring and to a great extent had dried before the

hot weather had set in, but in this case it happened in the midst of the hottest season and during the months we have the greatest amount of malarial troubles. Our people were indignant at the owner of this property for doing as he did, but if it increased sickness at all I was never able to detect it. The truth of the matter is we had fewer cases of malaria than usual. This spring we have suffered from a prolonged and severe drought, and this same pond is now almost dry with the exception of the pools of stagnant water and the main channel of the stream that supplies water to the pond, yet we have been entirely free from sickness of a malarial nature except in the locality of the well referred to above and these cases were early in the spring before drought set in. Since receiving your letter I have made it a point to fish in this pond during all hours of the day (and the stench from the mud and decaying vegetation was very offensive) to see if breathing in these noxious vapors would produce malaria in my system. No trouble at all was experienced from thus exposing myself. Others who exposed themselves as much if not more than I did, and refrained from drinking the branch and spring water along the streams also escaped malaria; but in nearly every instance where they drank from the creek and springs along this creek that supplied the pond they had malaria in some form.

I will give you one more striking instance where the water was the prime cause of malarial troubles. Two miles below this place on the river is a large saw-mill. One of the hands who acted as watchman was required to be on the grounds all the time, and a house was built for his family near the mill. This family and the hands of the mill used water from a spring that came from the earth in a low, marshy place. A curb was sunk in the mud around this spring, which held about two barrels of water all the time, and an overflow of the curb was the only way for the water to escape. As long as

this water was used by this man's family and the rest of the hands at the mill some of them were down with malarial fever all the time. I pointed out the trouble to them and had them to use water from another spring that flowed from a high embankment or hill, and said spring had no basin to it, but the water was taken into the vessels as it flowed out of the hill. The result was the malarial troubles were greatly diminished and my visits to these people were cut down over half.

In conclusion, I will say there is no doubt in my mind that drinking water plays an important part in causing malarial troubles, and that if we can get in this eastern section good, pure water, free from surface water, we will have little to fear from malaria. I am, very truly yours,

R. A. WHITAKER, M. D.

**Summary of Reports from County Superintendents of Health for April, 1895.**

(EIGHTY-NINE COUNTIES REPORTING).

In the blanks on which these reports are made the following items are called for:

1. The number of cases of small-pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.
2. The diseases which have been prevalent in the county and in what parts.
3. Epidemics among domestic animals.
4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. Two cases of diphtheria. The sanitary condition of towns not very good.

ALEXANDER—Dr. R. B. Killian, Taylorsville. Very little sickness.

ALLEGHANY—Dr. C. G. Fowlkes, Topia. Two cases of typhoid fever. Mild catarrh and rheumatism in many parts. An epidemic of chicken cholera. The court-house is just ready to fall down.

ANSON—Dr. E. S. Ashe, Wadesboro. No report.

ASHE—Dr. L. C. Gentry, Jefferson. One case of typhoid fever. Some influenza.

BEAUFORT—Dr. John C. Rodman, Washington. Diarrhoeal diseases in certain parts. There has been some draining in town and more is needed.

BERTIE—Dr. H. V. Dunstan, Windsor. Chills and fevers and bronchial troubles in some parts. An epidemic of hog cholera.

BLADEN—Dr. Newton Robinson, Elizabethtown. No diseases to report.

BRUNSWICK—Dr. D. I. Watson, Southport. No diseases to report.

BUNCOMBE—Dr. H. L. Baird, Asheville. Pneumonia and influenza to a slight extent.

BURKE—Dr. J. L. Laxton, Morganton. Very little sickness. The county home is neat and clean and well kept. There has been very little sickness among its inmates for several years.

CABARRUS—Dr. Leona M. Archey, Concord. Mild malarial and catarrhal fevers in many parts. An epidemic of pneumonia in horses.

CALDWELL—Dr. A. A. Kent, Lenoir. No sickness except a few cases of tonsillitis, bronchitis and pneumonia and one of roseola. The grand jury at the recent term of court made a very adverse report as to the capacity and faulty construction of the jail, but as yet there is no move to build a new one.

CAMDEN—No Board of Health.

CARTERET—Dr. Geo. N. Ennett, Beaufort. La grippe and pneumonia in some parts. Owing to recent unprecedentedly heavy rain-fall the general sanitary condition of the county is bad; especially so in the town of Beaufort, for want of proper sewerage.



CASWELL—Dr. W. O. Spencer, Yanceyville. One case of scarlatina of very mild type. Indefinite reports of more in the south-western part. Proper precautions against spreading used in the case mentioned.

CATAWBA—Dr. J. M. McCorkle, Newton. No diseases reported.

CHATHAM—Dr. L. A. Hanks, Pittsboro. One case of typhoid fever. Bronchial affections in many parts.

CHEROKEE—Dr. J. F. Abernathy, Murphy. Health of people very good. There is la grippe or something allied to it.

CHOWAN—Dr. R. H. Winborne, Rockahock. Bronchitis and mumps in some parts. A slight epidemic of hog cholera. Some cases of rabies in dogs.

CLAY—Dr. W. E. Sanderson, Hayesville. No diseases to report.

CLEVELAND—Dr. O. P. Gardner, Shelby. Whooping-cough in the southern part. The sewerage of the jail has been greatly improved.

COLUMBUS—Dr. I. Jackson, Whiteville. Three cases of typhoid fever. Hog cholera in some localities, but not as much as usual.

CrAVEN—Dr. Leinster Duffy, Newbern. Influenza in mild form, whooping-cough and pneumonia. One case of diphtheria.

CUMBERLAND—Dr. J. H. Marsh, Fayetteville. La grippe in many parts.

CURRITUCK—No Board of Health.

DARE—Dr. W. H. Peterson, Manteo. Two cases of typhoid fever. The sanitary condition of the county is not good on account of fish offal being extensively used as a fertilizer and polluting the drinking water. No interest is manifested by the county officials in the sanitary condition of the public buildings.

DAVIDSON—Dr. R. L. Payne, Lexington. Whooping-cough in the northern and western parts. Certain parts of the county are badly in need of drainage.

DAVIE—Dr. James McGuire, Mocksville.

One case of scarlatina reported. Whooping-cough has prevailed generally.

DUPLIN—Dr. W. P. Kennedy, Warsaw. La grippe and pneumonia in several parts. Heavy rains and poor drainage have rendered many parts unsanitary and the water bad for drinking purposes.

DURHAM—Dr. J. M. Manning, Durham. No diseases to report. I have never seen so little sickness in the town and hear of none in the county.

EDGEcombe—Dr. Donald Williams, Tarboro. One case of diphtheria. Influenza and tonsillitis in all parts.

FORSYTH—Dr. D. N. Dalton, Winston. The least sickness ever known.

FRANKLIN—Dr. E. S. Foster, Louisburg. No diseases of any importance. The jail is not sufficiently ventilated. I am at work on the Commissioners now for the necessary additions.

GASTON—Dr. J. H. Jenkins, Dallas. Whooping-cough still prevails. A few cases of dysentery and cholera infantum. Several cases of sporadic croup in children.

GATES—Dr. I. W. Costen, Gatesville. One case of typhoid fever.

GRAHAM—No Board of Health.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. Some erysipelas and pneumonia.

GREENE—Dr. E. H. Sugg, Snow Hill. Malarial fever and a few cases of scarlatina and roseola.

GUILFORD—Dr. A. R. Wilson, Greensboro. Catarrhal diseases. The jail is filthy. It needs a water supply and sewerage.

HALIFAX—Dr. I. E. Green, Weldon. But little sickness in any portion of county. Cholera among hogs and chickens in some sections.

HARNETT—Dr. J. F. McKay, Dickinson. Pneumonia and catarrhal troubles in some parts.

HAYWOOD—Dr. J. Howell Way, Waynesville. Very little sickness in town or county.

HENDERSON—Dr. J. L. Egerton, Hendersonville. No diseases to report.

HERTFORD—Dr. John W. Tayloe, Union. Some hydrophobia in dogs. County unusually healthy; some few cases of chills.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. Two cases of scarlatina. An epidemic of chicken cholera. A great work has been done on Fourth Creek bottoms between the Mocksville and Jonesville roads through the untiring efforts of Mr. Jackson Sullivan, the chairman of the creek commission. The creek has been relieved of logs and the channel straightened until the lands on either side which were covered with frog, turtle and malaria bog ponds are now dry enough to cultivate. I must in this way congratulate him and his colleagues upon this grand piece of work, and I hope that others will soon follow the example of this good old man. A little more effort of this kind will bring into view some of the finest land in the State and make our people among the healthiest.

JACKSON—Dr. W. F. Tompkins, Webster. No diseases to report. A force pump has just been put up and water is now forced into the jail for lavatory and other purposes.

JOHNSTON—Dr. R. J. Noble, Selma. A few cases of cholera in hogs.

JONES—Dr. R. A. Whitaker, Trenton. Four cases of whooping-cough. Mild intermittent fever. The Commissioners have ordered a new roof for the jail.

LENOIR—Dr. C. B. Woodley, Kinston. Measles and mumps to a great extent.

LINCOLN—Dr. W. L. Crouse, Lincolnton. Ten cases of whooping-cough. Some bronchial and pneumonic troubles in all parts. An epidemic of distemper in horses.

MACON—Dr. S. H. Lyle, Franklin. Four cases of diphtheria.

MADISON—Dr. James K. Hardwicke, Marshall. Two hundred cases of measles. The roof of the jail has been repaired. The County Commissioners were not to blame

for the late disgraceful overcrowding, and will see that it does not occur again.

MARTIN—Dr. W. H. Harrell, Williamston. Mild catarrhal affections of the respiratory tract in all parts. Scattered cases of hog cholera. Heavy rains and overflow from the river have made the well water bad. The jail is not properly ventilated.

MCDOWELL—Dr. B. A. Cheek, Marion. Catarrhal troubles.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. Whooping-cough, 10; scarlatina, 3; diphtheria, 1; typhoid fever, 1. Catarrhal affections in all parts. Complaint is frequent from the Long Creek section, many people having chills, caused, it is supposed, by the choking of the channel and overflow of the water on the lowlands. The sanitary condition of one of the county convict camps is excellent, the other fair only.

MITCHELL—Dr. C. E. Smith, Bakersville. Three cases of typhoid fever and a few of pneumonia. La grippe in some parts.

MONTGOMERY—Dr. W. A. Simmons, Troy. Very healthy. Some bronchitis.

MOORE—Dr. Gilbert McLeod, Carthage. Some influenza and bronchial troubles during the first half of April.

NASH—Dr. J. J. Mann, Nashville. Very little sickness.

NEW HANOVER—Dr. R. D. Jewett, Wilmington. One case of typhoid fever, three of German measles, some varicella and a good deal of pneumonia. The jail is crowded to an unreasonable extent, due partly to the large number of United States prisoners and partly to the less frequent holding of the Criminal Court under the new law. I look for much trouble during the hot summer months.

NORTHAMPTON—Dr. H. W. Lewis, Jackson. Two cases of hemorrhagic malarial fever. Influenza and malarial fever in all sections. I am urging, and with some effect, the sinking of driven wells; many are putting them down.

ON SLOW—Dr. E. L. Cox, Jacksonville. No diseases reported. The county home needs better drainage.

ORANGE—Dr. C. D. Jones, Hillsboro. A few cases of catarrhal fever and la grippe, five of pneumonia and some diarrhoea and malarial troubles.

PAMLICO—No Board of Health.

PASQUOTANK—Dr. W. W. Griggs, Elizabeth City. A few cases of pneumonia.

PENDER—Dr. George F. Lucas, Currie. Some dysentery and malarial fever in mild form. There is no cleaner or better ventilated jail in the State.

PERQUIMANS—Dr. John F. Speight, Hertford. La grippe and pneumonia.

PERSON—Dr. C. G. Nichols, Roxboro. No sickness.

PITT—Dr. W. H. Bagwell, Greenville. Many cases of whooping-cough, four of scarlatina and two of hemorrhagic malarial fever. Catarrhal troubles and some malarial fever. Hog cholera in some localities.

POLK—Dr. O. S. Missildine, Tryon. No disease in any part.

RANDOLPH—Dr. J. M. Boyette, Ashboro. One case of typhoid fever. Diarrhoea, bronchitis, la grippe and some pneumonia.

RICHMOND—Dr. J. M. Covington, Rockingham. Bronchial affections, influenza, pneumonia and rheumatism.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. No diseases reported.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. Mild cases of measles. Remittent fever in Reidsville.

ROWAN—Dr. John Whitehead, Salisbury. Pneumonia, bronchitis and malarial affections.

RUTHERFORD—Dr. W. A. Thompson, Rutherfordton. Little sickness. A few cases of catarrhal nature. The public buildings are neat and clean as they usually are just before and after court.

SAMPSON—Dr. John A. Stevens, Clinton. Health fairly good. Some hog cholera.

STANLY—Dr. D. P. Whitley, Millingport. Very little sickness. Will soon build a new jail.

STOKES—Dr. W. L. McCaless, Danbury. Whooping-cough in all parts.

SURRY—Dr. J. B. Hollingsworth, Mt. Airy. No sickness.

SWAIN—Dr. R. L. Davis, Bryson City. No sickness of any consequence.

TRANSYLVANIA—Dr. C. W. Hunt, Brevard. Three cases of pneumonia, one of phlegmonous erysipelas and some catarrhal affections.

TYRRELL—Dr. Ab. Alexander, Columbia. Six cases of typhoid fever in Gum Neck township.

UNION—Dr. J. E. Ashcraft, Monroe. Two cases of whooping-cough, five of typhoid fever, a few mumps and grip.

VANCE—Dr. W. T. Cheatham, Henderson. La grippe in all parts. Sanitary condition of the county has not been good owing to the immense rain-fall.

WAKE—Dr. P. E. Hines, Raleigh. One case of measles and six of whooping-cough. Bronchitis, pneumonia, rheumatism, la grippe and intermittent fever reported from all parts. Some chicken cholera. Dr. G. L. Kirby reports intermittent fever prevalent in the Insane Asylum "caused by the water-works pond." The temporary work-house quarters are a little crowded and there is not sufficient light, except on very fair, clear days. Fifty circulars and blanks for reports sent to physicians with six responses as the result.

WARREN—Dr. P. J. Macon, Warrenton. Bronchial affections and la grippe in all parts.

WASHINGTON—No Board of Health.

WATAUGA—Dr. W. B. Council, Boone. No sickness of any note.

WAYNE—Dr. W. J. Jones, Jr., Goldsboro. Malarial fever and catarrhal troubles in all parts.

WILKES—Dr. J. W. White, Wilkesboro. Influenza in some parts.

WILSON—Dr. Albert Anderson, Wilson. Two cases of typhoid fever and one each of pernicious and of hemorrhagic malarial fever.

YADKIN—Dr. T. R. Harding, Yadkinville. Nothing of note except a few mild cases of whooping-cough.

YANCEY—Dr. J. L. Ray, Burnsville. Catarrhal fever with a typhoid tendency in some parts, also measles and mumps. The county home is not kept as well as it should be. The jail is in better condition than usual, but not clean enough yet.

#### Review of Diseases for April, 1895.

BOWEL DISEASES—From Beaufort, Orange and Randolph.

BRONCHITIS—From Bertie, Caldwell, Chatham, Chowan, Lincoln, Martin, Montgomery, Moore, Randolph, Richmond, Rowan, Transylvania, Wake, Warren and Wayne—15 counties.

CHOLERA INFANTUM—From Gaston.

CHOLERA, IN CHICKENS—From Alleghany, Halifax and Iredell.

CHOLERA, IN HOGS—From Bertie, Chowan, Columbus, Halifax, Johnston, Martin and Pitt—7 counties.

CROUP—From Gaston.

DIPHTHERIA—From Alamance, Craven, Edgecombe and Mecklenburg.

DISTEMPER, IN HORSES—From Lincoln.

DYSENTERY—From Gaston and Pender.

ERYSIPELAS—From Granville and Transylvania.

INFLUENZA—From Ashe, Buncombe, Carteret, Cherokee, Craven, Cumberland, Duplin, Edgecombe, Mitchell, Moore, Northampton, Orange, Perquimans, Randolph, Richmond, Union, Vance, Wake, Warren and Wilkes—20 counties.

MALARIAL FEVER—From Bertie, Cabarrus, Greene, Jones, Northampton, Orange, Pender, Rockingham, Rowan, Wake and Wayne—11 counties.

MALARIAL FEVER, HEMORRHAGIC—From Northampton, Pitt and Wilson.

MALARIAL FEVER, PERNICIOUS—From Wilson.

MEASLES—From Lenoir, Madison, Rockingham and Wake.

MUMPS—From Chowan, Lenoir and Yancey.

PNEUMONIA—From Buncombe, Caldwell, Craven, Duplin, Granville, Lincoln, Mitchell, New Hanover, Orange, Pasquotank, Perquimans, Randolph, Richmond, Rowan, Transylvania and Wake—16 counties.

PNEUMONIA, IN HORSES—From Cabarrus.

RABIES, IN DOGS—From Chowan and Hertford.

RHEUMATISM—From Alleghany and Wake.

RÔTHELN—From New Hanover.

SCARLATINA—From Caswell, Davie, Greene, Iredell, Mecklenburg and Pitt—6 counties.

TYPHOID FEVER—From Alleghany, Ashe, Chatham, Columbus, Dare, Gates, Mecklenburg, Mitchell, New Hanover, Randolph, Tyrrell, Union and Wilson—13 counties.

WHOOPING-COUGH—From Cleveland, Craven, Davidson, Davie, Gaston, Jones, Lincoln, Mecklenburg, Pitt, Stokes, Union, Wake and Yadkin—13 counties.

#### Summary of Mortuary Reports for April, 1895.

(TWENTY-NINE TOWNS).

	White.	Col'd.	Total.
Aggregate population.....	86,800	61,054	147,854
Aggregate deaths.....	85	94	179
Representing annual death-rate per 1,000.....	11.7	15.3	14.5
<i>Causes of death.</i>			
Typhoid Fever.....	1	1	2
Malarial Fever.....	3	0	3
Whooping cough.....	2	0	2
Measles.....	1	0	1
Pneumonia.....	11	14	25
Consumption.....	9	15	24
Brain diseases.....	9	0	9
Heart diseases.....	10	10	20
Neurotic diseases.....	3	2	5
Diarrhoeal diseases.....	2	0	2
All other diseases.....	25	47	75
Accident.....	3	4	7
Suicide.....	3	0	3
Violence.....	0	1	1
	85	94	179
Deaths under 5 years.....	16	19	35
Still-born.....	5	11	16

## Condition of Jails and County Homes by Counties for April, 1895.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates in.	Space allotted each. (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance .....	good	20 (a)	.....	.....	.....	good	38	.....	.....	.....
Alexander.....	§	1	.....	.....	.....	good	9	.....	.....	.....
Alleghany.....	fair	1	1900	.....	1	good	5	*	.....	0
Anson .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ashe .....	first-rate	0	.....	.....	.....	fair	7	.....	.....	.....
Beaufort .....	fairly good	16	800	.....	.....	fairly good	16	*	.....	.....
Bertie.....	very good	10 (b)	.....	.....	.....	very good	18	.....	.....	.....
Bladen .....	fair	2	.....	.....	.....	fair	9	.....	.....	.....
Brunswick ...	†	2	*	0	1	†	10	900	0	1
Buncombe.....	good	81 (c)	900-1200 (d)	15	32	good	.....	450-900	19	12
Burke.....	fair†	8	.....	.....	.....	well kept	14	.....	.....	.....
Cabarrus.....	fine	38 (e)	*	5	29	fine	24	*	13	13
Caldwell .....	§	5	900	0	5	fair	1	*	0	0
Camden .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carteret.....	§	3	1000	1	3	fairly good	0	.....	.....	.....
Caswell .....	fair	2 (f)	.....	.....	.....	fair	23	.....	.....	.....
Catawba.....	very good	7	.....	3	5	very good	36	.....	11	12
Chatham.....	very good	9 (g)	*	0	4	very good	26	*	10	10
Cherokee.....	first-rate	1	.....	.....	.....	first-rate	2	.....	.....	.....
Chowan .....	well kept	2	*	0	0	well kept	5	*	0	1
Clay .....	§	0	.....	.....	.....	.....	0	.....	.....	.....
Cleveland.....	good	5	1000	.....	.....	good	30	900	.....	.....
Columbus.....	good	6	*	.....	1	good	10	*	.....	0
Craven.....	good	20	650	4	5	good	16	*	14	3
Cumberland ..	good	15	.....	.....	.....	good	19	.....	.....	.....
Currituck.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dare .....	very bad	4	.....	0	2	only fair	1	.....	.....	.....
Davidson .....	fair§	6	*	.....	6	fair§	26	721	.....	2
Davie .....	well kept	2	.....	0	2	well kept	6	.....	1	0
Duplin .....	clean	0	.....	.....	.....	clean§	14	1000	3	4
Durham .....	good	38 (h)	* (i)	.....	.....	good	26	919	.....	.....
Edgecombe...	fair	14	*	2	3	fair	27	*	3	1
Forsyth .....	good	21	1000	10	6	good	28	*	15	4

\* Space exceeds 1,000 cubic feet. (a) Includes 19 in House of Correction. (b) All in House of Correction. (c) Includes 72 in House of Correction. (d) For House of Correction 200 to 300. (e) Includes 33 in House of Correction. (f) Both in House of Correction. (g) Includes 7 in House of Correction. (h) Includes 21 in House of Correction. (i) For House of Correction 519. § See Bulletin of April, 1895. † See Summary of Reports from County Superintendents in this issue.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number Inmates in.	Space allotted each, (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin.....	½	11	*	.....	.....	very good	22	*	.....	2
Gaston.....	well kept	.....	.....	.....	.....	well kept	.....	.....	.....	.....
Gates.....	good	2	.....	.....	.....	good	9	.....	.....	.....
Graham.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Granville ....	good	5	500	1	2	good	28	600	7	9
Greene.....	very good	2	500	.....	1	very good	10	1000	.....	1
Guilford.....	†	59 (a)	375 (b)	.....	.....	good	30	*	.....	.....
Halifax.....	good	15	.....	3	5	good	47	.....	6	5
Harnett.....	.....	0	.....	.....	.....	.....	0	.....	.....	.....
Haywood.....	good	12	.....	.....	.....	good	11	.....	.....	.....
Henderson ..	good	3	.....	.....	.....	good	3	.....	.....	.....
Hertford.....	fair	2	*	0	0	fair	6	*	0	1
Hyde.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iredell.....	½	47 (c)	300 †	.....	.....	fair½	.....	500 †	.....	.....
Jackson.....	½	13	609	0	11	good	1	.....	.....	.....
Johnston ....	fair½	1	*	.....	0	good	11	*	.....	0
Jones.....	good†	3	*	0	2	good	3	*	2	2
Lenoir.....	.....	10	*	0	4	.....	0	.....	.....	.....
Lincoln.....	well kept	1	*	.....	.....	well kept	25	300	.....	6
McDowell ....	½	.....	.....	.....	.....	good	11	.....	0	1
Macon.....	bad	8	600	5	1	good	10	1000	2	5
Madison.....	fair	10	500	4	3	good	17	400	7	9
Martin.....	†	7	*	1	2	good	14	*	5	4
Mecklenburg	good†	100 (d)	* (e)	.....	.....	good	76	*	.....	.....
Mitchell.....	good	12	.....	.....	.....	good	10	.....	.....	.....
Montgomery,	good	3	1000	.....	2	good	18	400	.....	4
Moore.....	fair	7	*	0	3	good	8	*	2	3
Nash.....	first-rate	6	600	7	8	first-rate	34	1000	5	5
New Hanover	†	70 (f)	† (g)	.....	61	good	23	*	.....	8
Northampton	good	0	.....	.....	.....	good	29	1000	10	6
Onslow.....	fair	6	.....	.....	.....	fair	3	.....	.....	.....
Orange.....	good	0	.....	.....	.....	good	17	*	.....	.....
Pamlico.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* Space exceeds 1,000 cubic feet. ½ See Bulletin of April, 1895. † See Summary of Reports of County Superintendents in this issue. (a) Includes 29 in House of Correction. (b) For House of Correction 175. (c) Includes 27 in House of Correction. (d) Includes 87 in House of Correction. (e) For House of Correction 700. (f) Includes 13 in House of Correction. (g) For House of Correction 300.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition	Number Prisoners confined.	Space allotted each, (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number Inmates in.	Space allotted each, (In cubic feet)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank...	good	0	*	.....	.....	good	24	*	6	2
Pender .....	excellent	1	.....	0	0	good	5	.....	0	0
Perquimans..	good	6	.....	.....	.....	good	7	.....	.....	.....
Person.....	very bad	2	800	.....	1	good	13	1000	.....	3
Pitt.....	very good	9	750	0	1	very good	28	1000	2	0
Polk .....	poor $\frac{1}{2}$	9	.....	0	.....	good	4	.....	.....	.....
Randolph.....	excellent	12	.....	.....	.....	excellent	29	.....	.....	.....
Richmond ....	fair	18	.....	3	6	fair	21	.....	4	4
Robeson .....	good	9	.....	.....	.....	good	16	.....	.....	.....
Rockingham,	good	10	1000	.....	.....	good	42	500-700	.....	.....
Rowan .....	good	14	500	6	6	fair	23	500+	13	7
Rutherford ...	good	15	700	.....	.....	good	18	700	.....	.....
Sampson.....	well kept	8	.....	.....	.....	well kept	17	.....	.....	.....
Stanly.....	good	1	*	0	1	good	9	*	0	1
Stokes .....	good	8	600	3	2	good	11	700	3	4
Surry .....	good	5	770	0	1	good	18	700	0	5
Swain.....	good	6	.....	.....	.....	good	4	.....	.....	.....
Transylvania,	good	1	.....	.....	.....	good	4	.....	.....	.....
Tyrrell.....	good	1	*	0	.....	$\frac{1}{2}$	0	.....	.....	.....
Union .....	good	10	.....	.....	.....	good	27	.....	.....	.....
Vance .....	good	8	*	2	3	good	12	*	3	3
Wake .....	very good†	88 (a)	.....	.....	.....	very good	65	.....	.....	.....
Warren .....	very good	0	*	.....	1	very good	17	*	.....	3
Washington...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watauga.....	very good	2	.....	.....	.....	very good	7	.....	.....	.....
Wayne .....	good	15 (b)	.....	.....	3	good	10	.....	.....	.....
Wilkes .....	fair	7	.....	.....	.....	fair	13	.....	.....	.....
Wilson .....	good	12	*	2	2	good	28	*	6	5
Yadkin .....	good	7	.....	0	1	good	24	.....	0	7
Yancey .....	†	7	320	1	4	†	3	.....	.....	.....

\* Space exceeds 1,000 cubic feet.  $\frac{1}{2}$  See Bulletin for April, 1895. † See Summary of Reports of County Superintendents in this issue. (a) Includes 75 in House of Correction. (b) Includes 4 in House of Correction.

Mortuary Report for April, 1895.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping-cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrheal Diseases.	All Other Diseases.	Accident.	Suicide.	Violence.	TOTAL DEATHS.				
		By Races.	Total.	By Races.	Total.																	By Races.	By Towns.	Deaths under 5 years.	Still-born.	
Asheville } Dr. H. L. Baird.	White. Colored.	8,000 4,000	12,000	12.0 9.0	12.8							2	4	1	1	4							9	12	3	1
Charlotte } Fred. Nash, Esq.	White. Colored.	9,000 6,000	15,000	20.0 28.0	23.3		3	2				6	1	1	1	5	5	1					15	29	5	2
Durham } Dr. J. M. Manning.	White. Colored.	4,500 3,500	8,000	10.7 10.3	10.5							2	1	1	2								4	7		1
Fayetteville } Dr. J. H. Marsh.	White. Colored.	2,800 2,200	5,000	12.9 38.2	24.0								1	2		2	5	1					3	7	10	1
Goldsboro } T. H. Bain, Esq.	White. Colored.	3,500 1,800	5,300	17.1 13.3	15.8							2	1	1	1	1	1						5	7	1	1
Greensboro } Dr. A. R. Wilson.	White. Colored.	5,500 2,500	8,000	2.2 43.2	15.0							2	1	1		3	2						1	10		1
Henderson } Dr. W. J. Judd.	White. Colored.	2,250 2,000	4,250	5.3 6.0	5.6								1										1	2		
Hillsboro } Dr. C. D. Jones.	White. Colored.	400 300	700	0.0 0.0	0.0																		0	0		
Jacksonville } Dr. E. L. Cox.	White. Colored.	400 206	600	30.0 0.0	20.0					1													0	1		
Lenoir } Dr. A. A. Keut.	White. Colored.	800 200	1,000	0.0 0.0	0.0																		0	0		
Lexington } Dr. R. L. Payne.	White. Colored.	1,800 300	2,100	6.7 0.0	5.7														1				1	1		
Marion } Dr. B. A. Cheek.	White. Colored.	650 150	800	18.5 0.0	15.0								1										0	1		
Monroe } Dr. J. M. Blair.	White. Colored.	1,800 600	2,400	0.0 20.0	5.0								1										0	1		
Oxford } Dr. W. O. Baskerville.	White. Colored.	1,500 1,300	2,800	8.0 27.7	17.1							1											1	4		1
Pittsboro } Dr. L. A. Hanks.	White. Colored.	350 250	600	0.0 0.0	0.0																		0	0		
Raleigh } Dr. James McKee.	White. Colored.	8,500 7,500	16,000	8.4 16.0	12.0							1	1	2	1	1	1						6	16		1
Rockingham } Dr. J. M. Covington.	White. Colored.	1,300 450	1,750	9.2 0.0	6.8							1											1	1		
Rocky Mount } Dr. G. L. Wimberley.	White. Colored.	1,200 400	1,600	20.0 30.0	22.4														1	1			2	3		
Salem } F. E. Keehn, Esq.	White. Colored.	3,942 342	4,284	12.2 70.2	16.8							1	2						1				2	6		2
Salisbury } Dr. John Whitehead.	White. Colored.	3,500 1,500	5,000	20.6 24.0	21.6							1	1	1		2							6	9		1
Scotland Neck } Mayor J. A. Perry.	White. Colored.	700 400	1,100	17.1 60.0	32.7							1				2			1				2	3		
Southport } L. A. Galloway, Esq.	White. Colored.	750 450	1,200	0.0 53.3	20.0								1										0	2		
Statesville } Dr. W. J. Hill.	White. Colored.	2,500 1,000	3,500	14.4 0.0	10.3														3				3	3		
Tarboro } Dr. Donald Williams.	White. Colored.	1,258 1,112	2,370	19.1 10.8	15.2														2				2	3		
Washington } Dr. J. C. Rodman.	White. Colored.	3,000 2,500	5,500	12.0 19.2	15.3								1						1	1			3	7		
Weldon } Mayor J. T. Gooch.	White. Colored.	700 800	1,500	0.0 0.0	0.0																		0	0		
Wilmington } Dr. R. D. Jewett.	White. Colored.	9,000 13,000	22,000	13.3 11.1	12.0							4	1	2		3							10	22		1
Wilson } Dr. Albert Anderson.	White. Colored.	2,000 1,500	3,500	6.0 24.0	13.7	1													3				1	4		1
Winston } Dr. John Bynum.	White. Colored.	5,200 4,800	10,000	9.2 27.5	18.0	1						1	1						2				4	15		1

\* Visitor.



**Meteorological Summary for North Carolina, April, 1895.**

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., Director.

C. F. VON HERRMANN, Meteorologist.

STATIONS.	TEMPERATURE (Degrees Fahr.).									Mean Rel. Humidity.	Total Precipitation.	NO. OF DAYS.				Prevailing Wind.
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range.			Clear.	Partly Cloudy.	Cloudy.	Rainy.	
Asheville .....	57.2	80	23	71.5	30	5	42.9	50	28.6	58.9	4.04	17	7	6	5	S. E.
Bakerville.....	51.4	82	25	66.0	25	5	36.8	57	29.2	.....	4.93	.....	.....	.....	4	.....
Blowing Rock.....	45.1	70	28	53.3	27	15	57.0	33	16.3	.....	4.54	15	4	11	8	N. W.
Charlotte .....	58.4	83	25	68.0	31	4	48.8	52	19.2	72.5	5.00	14	9	7	16	S. W.
Chapel Hill .....	57.4	85	22	68.5	29	3	46.2	56	22.3	.....	11.42	12	10	8	11	S. W.
Horse Cove.....	53.9	78	25	63.9	26	4	43.9	52	20.0	.....	10.92	16	4	10	12	N. W.
Littleton .....	56.9	85	25	67.7	31	3	46.1	54	21.6	.....	9.10	13	5	12	13	N. E.
Lenoir .....	55.7	80	25	64.5	29	4	46.3	51	18.2	.....	5.85	13	8	9	9	W.
Louisburg.....	57.2	84	22	68.7	29	4	45.8	55	22.9	.....	5.65	.....	.....	.....	11	.....
Mt. Airy .....	55.0	83	25	67.2	26	4	42.8	57	24.4	.....	5.37	12	6	12	8	S. W.
Mt. Pleasant.....	57.7	83	25	69.1	29	4	46.2	54	22.9	.....	6.33	7	9	14	12	.....
Marion .....	54.3	82	25	69.3	25	4	39.3	57	30.0	.....	4.45	.....	.....	.....	7	.....
Newbern .....	60.7	85	22	71.2	36	4	50.2	49	21.0	.....	10.20	.....	.....	.....	11	.....
Oak Ridge .....	56.8	85	25	68.6	28	4	45.1	57	23.4	.....	5.37	14	12	4	14	W.
Pittsboro .....	55.8	82	25	65.7	31	4	45.9	51	19.8	.....	13.40	4	15	11	12	S. W.
Raleigh .....	57.6	85	22	67.7	33	4	47.5	52	20.2	73.0	7.95	13	3	14	17	N.
Rockingham .....	61.2	88	22	74.6	34	4	47.8	54	26.8	.....	7.35	14	8	8	11	.....
Roxboro.....	56.2	85	25	67.2	29	4	45.1	56	22.1	.....	6.12	12	9	9	9	.....
Soapstone Mount.....	55.8	84	25	68.7	25	4	42.9	59	25.8	.....	7.49	6	12	12	13	S. W.
Saxon .....	56.9	86	25	69.1	24	3	44.7	62	24.4	.....	4.16	6	15	9	10	N. W.
Southern Pines.....	59.8	83	25	69.1	34	4	50.6	49	18.5	78.2	6.83	16	5	9	15	E.
Salisbury .....	59.9	82	25	68.9	40	4	50.9	42	18.0	.....	5.55	.....	.....	.....	12	.....
Sloan .....	59.5	85	25	70.7	34	5	48.4	51	22.3	.....	8.04	8	6	16	13	S. W.
Willeyton .....	58.4	90	25	71.0	34	4	45.7	56	25.3	.....	6.43	13	8	9	10	S.
Weldon.....	57.2	83	25	68.0	32	4	46.5	51	21.5	.....	8.08	13	7	10	15	S.
Wilmington .....	60.9	81	23	69.0	37	4	52.7	44	16.3	82.8	6.56	12	5	13	16	S.

STATE METEOROLOGICAL SUMMARY FOR APRIL, 1895.

Mean barometer, 30.03 inches; normal for April, 30.02. Highest barometer, 30.58 on the 12th, at Raleigh.  
 Lowest barometer, 29.43 on the 2d, at Kitty Hawk.  
 Mean temperature, 57.1 degrees; normal for April, 57.7. Highest temperature, 90 on the 25th at Willeyton.  
 Lowest temperature, 22 on the 4th at Highlands.  
 Average rain-fall, 7.51 inches; normal for April, 3.84 inches. Greatest monthly rain-fall, 14.84 inches at Highlands. Least monthly rain-fall, 3.09 inches at Waynesville.  
 Average number of clear days, 13; partly cloudy, 8; cloudy, 9; rainy, 12.  
 Prevailing wind direction, west and south-west; average velocity, 8.9 miles per hour. Normal direction for April, south-west. Normal velocity, 8.8 miles per hour.







# BULLETIN

OF THE

# NORTH CAROLINA BOARD OF HEALTH.

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**SUBSCRIPTION, 25 CENTS A YEAR.**

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RICHARD H. LEWIS, M. D., <i>Secretary and Treasurer</i> , Raleigh.			

VOL. X.

JUNE, 1895.

No. 3.

## Hygiene and the Profession.

In his admirable address at the recent meeting of the State Medical Society, President Tucker paid special attention to preventive medicine. Indeed, it was the principal theme of his discourse. We were much pleased with his treatment of the subject, but more gratified at the fact of his recognizing its importance and magnifying it. It portends the dawn of a brighter day, we hope and believe. When the medical profession, generally, becomes sincerely interested, and takes an active part in the propagation of the gospel of health the conversion of the people is assured. We take both pride and pleasure in presenting to our readers the portion of the address referred to, as follows:

\* \* \* "I desire to ask your attention, briefly, to a consideration of some of the obligations resting upon our profession, and especially upon this Society, in the line of the prevention of diseases. I trust no apology will be deemed necessary by this body of pro-

gressive physicians for suggesting methods by which their work may be diminished rather than increased. Industrial corps, labor unions, farmers' alliances and other like organizations view with grave suspicion the action of a member who would, by any method hinder or lessen the business activities of their orders, but modern medicine under the new era, the medicine in whose service we are enlisted and at whose shrine we bow, speaks in no uncertain tone when the physician is sent forth to prevent disease, lessen sickness and prolong human life, and no priesthood proclaims a purer gospel than the simple and unselfish creed of him who wards off and prevents the disease for the cure of which he would receive fame, fortune and power.

The late Professor Flint, the great teacher, the profound author and America's greatest physician of his day, in a posthumous address prepared for the British American Association of 1886, says: "The medical profession shall have reached an high ideal posi-

tion when the physician, guided by his knowledge of diagnosis, the natural history of diseases and existing therapeutic resources may, with neither self-distrust nor the distrust of others, treat an acute disease by hygienic measures without potent medication. When this time comes a system of practice which assumes to substitute medical dynamics for the *Vix Medicatrix Nature* will have been added to the list of by-gone medical delusions."

Again, about the same time, the late Professor Samuel D. Gross, America's great surgeon, and the peer of any surgeon in the world, in his last public address, spoken at the dedication of the McDowell monument, says: "The great question of the day is not this operation or that, not ovariectomy, or lithotomy, or an hip-joint amputation, which has reflected so much glory on American medicine, but preventive medicine—the hygiene of our persons, our dwellings, our streets, in a word, our surroundings, whatever and wherever they may be, whether in city, town, hamlet or country.

"This is the great problem of the day, the question which you, as the rising generation of physicians, should urge in season and out of season upon the attention of your fellow citizens, the question which, above and beyond all others, should engage your most serious thought and elicit your most earnest co-operation."

In full touch with these sentiments, which have come to us as a blessed heritage from men who have brought renown upon modern medicine—one representing the medical and the other the surgical thought of the day, and both crystallizing their views in an appeal for hygienic and sanitary reform and a more rigid observance of all that may be embraced in the generic term

of preventive medicine, it is not surprising that this Society, under the leadership of the late Dr. Thomas F. Wood and a few faithful coadjutors, should have organized a Board of Health and sent it upon the mission of preventing disease, collecting vital statistics and teaching the people the benefits and blessings which come from a wise observance of sanitary rules and regulations.

It would be interesting to study the history of this Board, its struggle for existence, difficulties of securing public confidence, and still greater difficulty in disseminating sanitary teachings among the people, and that, too, under the most brilliant leadership which any service could possibly command; suffice it to say it has grown from a mere committee of this Society into an active, useful and indispensable part of our State governmental system, and is to-day, in its work of preventing disease, lessening sickness and prolonging human life, accomplishing a service which entitles it to the admiration of this Society and the confidence and support of the people of the State. This Board comes to us in conjoint session for conference, for encouragement and support, and the question which naturally arises is, Are we giving it the support which its relation towards us and the important interest it has in hand demands, and if not, why not?

Let us for a moment consider the question of vaccination. For many years past the worthy Secretary of the Board of Health has reported to this Society an increased indifference on the part of the profession and the people to this great preventive measure, and in a recent session he announces from the floor of this Society that, in his belief, nothing short of a visitation of an epidemic of this dread dis-

ease, small-pox, in our borders will arouse the people to the sense of their danger and impress upon them the necessity for vaccination. We have no statistical data upon which to base an opinion, but a conservative estimate would leave more than one-half of our people, ages and classes considered, without the benefit of this great prophylaxis, and when we consider the increasing number of epidemics of small-pox occurring in the more populous eastern States, the increased facilities for travel and the changed habits of our people with regard to travel, many thousands going and returning from the great centres of population, thereby subjecting themselves to the danger of contracting a disease which, once set on foot in our State, will grow into a conflagration more appalling, if possible, and more difficult of suppression than a prairie fire in mid-summer, we may well counsel together about matters of prevention.

This body is too technical for any exhaustive arguments in defence of the utility of vaccination, but in view of the existing apathy and the urgent necessities of the situation, I trust you will excuse some references along these lines. Medical and sanitary scientists teach to-day that small-pox is absolutely within the power of man to repress, and that a death from this disease shows criminal carelessness and should be charged neither to the ignorance of man nor the providence of God.

Standard medical authorities and current medical literature teem with indisputable proof that when compulsory vaccination is enforced, small-pox enjoys no lease of life, and is scarcely known in mortality reckonings. In epidemics of small-pox it is a well-ascertained fact that the mortality in non-

vaccinal cases is from 40 to 51 per cent., whereas in post-vaccinal cases it is only about 4 per cent., and yet, in spite of these convincing proofs, the anti-vaccinists, whose opposition is founded on ignorance and prejudice and whose arguments are supported by factitious statistics and misleading statements, flaunting their unallowed colors in the very face of our profession, assert that we suppress the truth as regards the frightful mortality and enormous sickness which attends vaccination, its complications and sequelæ. It is amazing that in this intelligent age there should be people in North Carolina who are imbued with these sentiments! Physicians everywhere, of large experience, have seen vaccinal complications, but very few have seen death or permanent injury result from them, and none have ever seen "frightful mortality" and enormous sickness result.

Dr. Quine, in a recent address before the Medical Society of Illinois on this subject, shows that in the city of Chicago there were one million of vaccinations with only two deaths which could possibly be ascribed to the complications of vaccination, furnishing a mortality too trifling to give the opposition any standing in a court of physicians. Again, the Germans to whom our profession is so largely indebted for having directed our study of infectious and contagious diseases along rational lines, in an official report to the German government, in 1890, report 2,485,483 vaccinations without a single death.

But I will not tire you further with exposition along this line. The consensus of medical and sanitary opinion, in which this Society will heartily join, is that vaccination and re-vaccination affords absolute protection against small-pox, and when properly done,

with pure vaccine lymph, there is positively no danger of death, serious sickness nor hurtful consequence from the operation, its complications or sequelæ.

In the sparsely populated condition of our State it would be impracticable to enforce compulsory vaccination, the law would be cumbrous, expensive and difficult of execution; but we can and should secure the enactment of a law making it compulsory in our public schools; indeed, we might go a step farther, and make a certificate of vaccination a prerequisite to entrance in any school whose doors are opened for public patronage, and we as physicians who are charged with the sacred duty of maintaining the health and promoting the well-being of the people, should resort more frequently to vaccination in our own private practice, remembering that the best "starting point" is at the physician's own household; through these combined agencies, in a few years, we may hope to have the larger portion of our people brought under the influence of this great prophylactic measure, and thus aid our Board in the accomplishment of a work which has occasioned so much anxiety.

The subject of tuberculosis is to-day one of the gravest with which the physician and sanitarian has to deal, and the necessity of lowering its frightful mortality by methods of prevention was never more keenly felt by our profession—a disease which, we are told, is responsible for one-seventh of the deaths from all causes in the world, furnishing an annual mortality greater than from all the infectious and contagious diseases combined, not excepting yellow fever and cholera, and rapidly increasing in our own State, especially among the working classes, will naturally engage your most serious consider-

ation and elicit your most earnest efforts in the line of its prevention.

Since the publication of Dr. Robert Koch's classical paper, in 1882, announcing the discovery of the tubercle bacillus and demonstrating its generic relation to disease, there has existed but little doubt in the minds of sanitary scientists that this disease should be properly grouped with the infectious and contagious class and brought under the surveillance of our health authorities, in order that aggressive measures may be instituted for its restriction. In a recent publication one of the most distinguished of our American sanitarians briefly summarizes his views as follows:

1. Tuberculosis is a communicable disease and is distinctly preventible.
2. It is acquired by direct transmission of the tubercle bacillus from the sick to the well, usually by means of the dried and pulverized sputum floating as dust in the air.
3. It can be largely prevented by simple and easily applied means of cleanliness and disinfection.

It is upon these propositions that the sanitary and health authorities of the country invoke the aid of our profession in devising means and instituting measures for restricting and lessening the frightful ravages of tuberculosis, and the mandates of professional honor and duty alike suggest a ready and willing response to the appeal.

The remedy is largely educational—the people must be taught, by publication, by lectures, by conference, public and private, in season and out of season, the true character of the disease, the danger of contagion, the source of infection, the method of disinfection, and, above all, the urgent need for rigid hygienic and sanitary treatment, personal and domiciliary,



and in no way can this work be made more effective than through the medium of the faithful and conscientious family physician.

These questions are worthy of your most serious consideration, for they involve grave responsibilities and are important enough to command the best executive ability and the profoundest medical and sanitary knowledge.

The methods instituted by our health authorities and now generally practiced in our villages and towns for the restriction of scarlet fever and diphtheria, namely, notification, isolation and disinfection, together with more intelligent, persistent and systematic efforts at disinfection in typhoid fever and other zymotic diseases, have been the means of preventing an enormous amount of sickness and suffering, and doubtless of saving innumerable lives.

The more intelligent of our people everywhere are beginning to realize the value of this service, and the time seems most auspicious for carrying forward our standards, and by public addresses, lectures, sanitary conferences and other agencies to create in the public mind a sentiment commensurate with the great interests involved—at least, as educated and progressive physicians, let us demonstrate to the people the necessity for, and the value of, public hygiene and sanitation, and that as a science it is something more than a mere “jumble of unproved” hypotheses. Lord Derby, years ago, declared that “no sanitary improvement worth the name will be effective, whatever acts you pass or whatever powers you confer on public officers, unless you create an intelligent interest in the matter among the people at large;” and this eminent authority further says: “With a low average of pub-

lic health, you will have a low average of public morality and probably also of public (or national) intellect.” The physical, moral, intellectual and material well-being of all classes of our people will be promoted by an enlightened administration of public hygiene, and in no other direction will an expenditure of labor, time and money give returns so immediate and of such immeasurable value.

If we were to apply the money test as to the value of each citizen who dies from a preventible disease, as suggested by Dr. Farr and corroborated by other sanitarians, it would constitute a sum so large that capitalists would be startled. It is enough to say that the amount saved to the state, as thus demonstrated, would be so enormous that the most visionary dreams of speculation can offer nothing so alluring: but this side of the question belongs to the political economist, and not to the physician.

We promise as the result of our labors, diminished sickness, improved health, increased longevity and the resultant blessings of happy and cheerful homes for the people of our State.

Statisticians tell us that the duration of human life has been advanced from twenty-eight and below to forty-one years under the ordinary workings of sanitary laws, and under more enlightened measures, that if mortality can be reduced to fifteen per thousand and maintained at that point, the rate will be advanced to fifty-four years; and if we can reach eight per thousand, as suggested by the distinguished Dr. Richardson in his beautiful picture of the ideal city of Hygeia, with her broad streets, lovely courts and faultless drains, her extended parks, silvery lakes and pure water, with a population “moral, cultured and intelligent,”

we will carry the rate up towards ninety. Hygeia is a city of the Millennium and these hopes are purely ideal and not within the range of present possibilities, but they are none the less valuable as pointers to the modern sanitist. Who can be more sensible of the value of sunshine, of fresh air, of pure water, of wholesome food, of effective drainage, of cleanliness and of thorough disinfection than the educated physician, and who can better impart this knowledge to those who anxiously look to him for guidance in matters affecting their health, happiness and well-being?

As members of a noble profession, and especially as members of this great and useful Society, let us carry forward the beneficent work; the soil is fertile and needs but the touch of the master hand to give forth an abundant harvest of good works." \* \* \*

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Summary of Reports from County Superintendents of Health for May, 1895 (eighty nine counties reporting).

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In the blanks on which these reports are made the following items are called for:

1. The number of cases of small pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred during the past month.

2. The diseases which have been prevalent in the county and in what parts.

3. Epidemics among domestic animals.

4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Super-

intendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction, and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. No diseases reported.

ALEXANDER—Dr. R. B. Killiam, Taylorsville. No sickness of importance.

ALLEGHANY—Dr. C. G. Fowlkes, Topia. Whooping-cough in the north-western part. One case of typhoid fever. Chicken cholera. There are some efforts at improving the courthouse or building a new one.

ANSON—Dr. E. S. Ashe, Wadesboro. Some malarial fever. A few cases of pneumonia. Hog cholera epidemic in part of the county.

ASHE—Dr. L. C. Gentry, Jefferson. No sickness of importance.

BEAUFORT—Dr. John C. Rodman, Washington. Diarrhoeal diseases in the county generally. A good deal of hog cholera. The county needs drainage in many places—the town also.

BERTIE—Dr. H. V. Dunston, Windsor. La grippe and fever and ague in some parts. An epidemic of hog cholera.

BLADEN—Dr. Newton Robinson, Elizabethtown. Very little sickness. Hog cholera.

BRUNSWICK—Dr. D. I. Watson, Southport. Some malarial fever.

BUNCOMBE—Dr. H. L. Baird, Asheville. A few mild cases of diarrhoea.

BURKE—Dr. J. L. Laxton, Morganton. No sickness reported.

CABARRUS—Dr. Leona M. Archey, Concord. Grippe, malarial and catar-

rhal fevers and dysentery in nearly all parts. One case of typhoid fever. Along certain creeks and on certain streets in town the sanitary condition is not good. Five physicians report. The court-house is not kept as clean as it should be.

CALDWELL—Dr. A. A. Kent, Lenoir. Three cases of typhoid fever and a few of pneumonia, dysentery and cholera infantum. Some improvement in the ventilation of the jail is being made, but a new jail is the only real remedy in the case.

CAMDEN—No Board of Health.

CARTERET—Dr. Geo. N. Ennett, Beaufort. One case of pernicious malarial fever. Some dysentery, malarial and bronchial troubles in all parts. The jail needs better ventilation. The court house is in fairly good condition, though the public square remains yet undrained or not filled in.

CASWELL—Dr. W. O. Spencer, Yanceyville. Little or no sickness of importance.

CATAWBA—Dr. J. M. McCorkle, Newton. No disease reported.

CHATHAM—Dr. L. A. Hanks, Pittsboro. Influenza in some parts and a few cases of pneumonia. The condition of the public buildings will doubtless compare favorably with any in the State.

CHEROKEE—Dr. J. F. Abernathy, Murphy. No diseases reported.

CHOWAN—Dr. R. H. Winborne, Rockahock. Mumps in the middle part. Some intermittent fever. An epidemic of hog cholera.

CLAY—Dr. W. E. Sanderson, Hayesville. One case of typhoid fever. The jail has been condemned as unsafe and the prisoners moved to Murphy. Its sanitary condition is good.

CLEVELAND—Dr. O. P. Gardner, Shelby. Four cases of typhoid fever. The drainage of towns is not as good as it should be. The physicians of the county met on the first Monday, organized a county medical society and took measures to secure co-operation in sanitary matters.

COLUMBUS—Dr. I. Jackson, Whiteville. Six cases of typhoid fever. A case of scarlatina heard of.

Craven—Dr. Leinster Duffy, Newbern. Bowel troubles quite prevalent. Some malarial fever and whooping-cough. Two cases of scarlatina.

CUMBERLAND—Dr. J. H. Marsh, Fayetteville. A few cases of whooping-cough. Bowel diseases in children.

CURRITUCK—No Board of Health.

DARE—Dr. W. H. Peterson, Manteo. One case of diphtheria, four of typhoid fever and ten of pernicious malarial fever.

DAVIDSON—Dr. R. L. Payne, Lexington. Whooping-cough and measles in scattered portions.

DAVIE—Dr. James McGuire, Mocksville. Whooping cough and bronchitis.

DUPLIN—Dr. W. P. Kennedy, Warsaw. Dysentery in some parts. Too much rain has rendered the drinking water poor.

DURHAM—Dr. Jno. M. Manning, Durham. Dysentery, malarial diseases and a few cases of la grippe. An epidemic of bronchial disease in horses. The sanitary condition of the neighborhood of the Pearl cotton mill is not good. An effort is being made to improve it. Two wells which furnish the drinking water have been sampled for analysis.

EDGECOMBE—Dr. Donald Williams, Tarboro. A few cases of tonsillitis and bronchitis, some of pneumonia.

FORSYTH—Dr. D. N. Dalton, Winston. Dysentery, diarrhœa and malarial fever in mild form in most parts.

FRANKLIN—Dr. E. S. Foster, Louisville. Nothing of importance. The jail is not sufficiently ventilated.

GASTON—Dr. J. H. Jenkins, Dallas. Some malarial fever, dysentery and diarrhœa. Big Long creek is a potent factor of so much malarial fever that drainage has been advised. Two rooms in jail have been overhauled and put in good sanitary condition.

GATES—Dr. I. W. Costen, Gatesville. One case of typhoid fever.

GRAHAM—No Board of Health.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. One case of diphtheria.

GREENE—Dr. E. H. Sugg, Snow Hill. Dysentery. I have ordered the jail and county home premises thoroughly limed as a preventative.

GUILFORD—Dr. A. R. Wilson, Greensboro. No diseases to report.

HALIFAX—Dr. I. E. Green, Weldon. Diarrhœa and dysentery in some parts. Some hog cholera.

HARNETT—Dr. J. F. McKay, Dickinson. Dysentery in some parts.

HAYWOOD—Dr. J. Howell Way, Waynesville. Scarcely any sickness.

HENDERSON—Dr. J. L. Egerton, Hendersonville. No diseases to report.

HERTFORD—Dr. John W. Tayloe, Union. I hear of typhoid fever in one section.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. One case of whooping cough and one of scarlatina. Sanitary condition of Fourth creek improved. An effort is being made to improve Third creek bottoms. The jail yard is being improved by the County Commissioners.

JACKSON—Dr. W. F. Tompkins, Webster. No diseases reported.

JOHNSTON—Dr. R. J. Noble, Selma. No diseases reported.

JONES—Dr. R. A. Whitaker, Trenton. Four cases of measles. Intermittent fever in all parts. An epidemic of cholera in hogs. A new roof has been put on the jail.

LENOIR—Dr. C. B. Woodley, Kinston. Very little acute sickness except intestinal troubles among children.

LINCOLN—Dr. W. L. Crouse, Lincoln. Six cases of whooping-cough. Malarial diseases in some parts, along water-courses.

MCDOWELL—Dr. B. A. Cheek, Marion. One case of typhoid fever. Mumps on Crooked creek and the river. Only Dr. Geo. P. Reid reported.

MACON—Dr. S. H. Lyle, Franklin. One case of diphtheria.

MADISON—Dr. Jas. K. Hardwicke, Marshall. Three cases of typhoid fever developed in one locality among people using water from a shallow spring below a hog pen and stable, the germs of the disease having been brought there from another county.

MARTIN—Dr. W. H. Harrell, Williamston. One case of typhoid fever. Mild bowel troubles. Heavy rains have made drinking water bad.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. Chills and fever in parts of city and county. The two creeks to the east and west of Charlotte are in bad sanitary condition, both being filled with sand and debris, causing the sewage to overflow during freshets and to spread out over the low grounds. This, together with decomposing vegetable matter, is a sufficient cause for sickness. An effort is being made to remedy the trouble, shared in by the

Board of County Commissioners and the city authorities. The city sewer system and the cleaning up of the city are also receiving attention.

MITCHELL—Dr. C. E. Smith, Bakersville. No sickness to report.

MONTGOMERY—Dr. W. A. Simmons, Troy. A few cases, perhaps, of pleuropneumonia.

MOORE—Dr. Gilbert McLeod, Carthage. Very little sickness.

NASH—Dr. J. J. Mann, Nashville. No disease reported.

NEW HANOVER—Dr. R. D. Jewett, Wilmington. Three cases of scarlatina and three of typhoid fever, remittent and intermittent fever, bowel troubles, catarrhal fever and pneumonia. Fourteen physicians reported.

NORTHAMPTON—Dr. H. W. Lewis, Jackson. Very little sickness.

ONSLow—Dr. E. L. Cox, Jacksonville. No diseases reported. The county home needs better drainage.

ORANGE—Dr. C. D. Jones, Hillsboro. Some catarrhal and gastric troubles. Little sickness.

PAMLICO—No Board of Health.

PASQUOTANK—Dr. W. W. Griggs, Elizabeth City. A few cases of intermittent fever and diarrhœa in the eastern part.

PENDER—Dr. George F. Lucas, Currie. Mild dysentery in some parts.

PERQUIMANS—Dr. John F. Speight, Hertford. Dysentery.

PERSON—Dr. C. G. Nichols, Roxboro. Some grip and pneumonia.

PITT—Dr. W. H. Bagwell, Greenville. Some whooping-cough. One case of hemorrhagic malarial fever. Hog cholera.

POLK—Dr. O. S. Missildine, Tryon.

has resigned, and Dr. Earl Grady, Tryon, has been elected to fill the unexpired term as Superintendent of Health. No diseases to report.

RANDOLPH—Dr. J. M. Boyette, Ashboro. Very little sickness.

RICHMOND—Dr. J. M. Covington, Rockingham. Very healthy. A few cases of la grippe and dysentery.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. Three cases of whooping-cough. Infantile diarrhœa. The sanitary condition of the jail needs improvement.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. No diseases to report.

ROWAN—Dr. John Whitehead, Salisbury. Two cases of typhoid fever. Malarial affections.

RUTHERFORD—Dr. W. A. Thompson, Rutherfordton. Remarkably healthy. A few cases of dysentery. The jail is as well kept, perhaps, as could be expected with such a poor building.

SAMPSON—Dr. John A. Stevens, Clinton. A few cases of diarrhœa and dysentery, and some malarial fever.

STANLY—Dr. D. P. Whitly, Millingport. Measles and whooping-cough in the western part.

STOKES—Dr. W. L. McCannless, Danbury. Whooping-cough in all parts.

SURRY—Dr. J. B. Hollingsworth, Mt. Airy. No report.

SWAIN—Dr. R. L. Davis, Bryson City. No sickness of importance. The condition of the jail is as good as it can be made under the circumstances. We need a new one.

TRANSYLVANIA—Dr. C. W. Hunt, Brevard. No sickness worthy of mention.

TYRRELL—Dr. Ab. Alexander, Co-

lumbia. Four cases of typhoid fever in Gum Neck township.

UNION—Dr. J. E. Ashcraft, Monroe. Four cases of whooping-cough, five of typhoid fever and a few of la grippe.

VANCE—Dr. W. T. Cheatham, Henderson. One case of typhoid fever. Unusually healthy.

WAKE—Dr. P. E. Hines, Raleigh. Bronchitis, one case of scarlatina. Chills and pneumonia around Morrisville. Bronchitis and rheumatism in the city, and diarrhœa, dysentery and chills at the Insane Asylum. Dr. G. L. Kirby reports the chills as caused by the water-works pond. Fifty circulars and blanks sent out with four replies.

WARREN—Dr. P. J. Macon, Warrenton. No diseases reported. Consumption among the colored seems to be on the increase. We have in our county more than 25 lunatics unable to get into the asylums. The houses at the home are being whitewashed inside and out.

WASHINGTON—No Board of Health.

WATAUGA—Dr. W. B. Councill, Boone. Mumps in the jail. I have never known so little sickness in the county or so many births.

WAYNE—Dr. W. J. Jones, Jr., Goldsboro. Malarial troubles in all parts.

WILKES—Dr. J. W. White, Wilkesboro. Some typhoid fever and whooping-cough.

WILSON—Dr. Albert Anderson, Wilson. Malaria and its complications in all parts. The jail has been overcrowded for about twenty days.

YADKIN—Dr. T. R. Harding, Yadkinville. Mild cases of whooping-cough.

YANCEY—Dr. J. L. Ray, Burnsville. A few cases of typhoid fever, mumps and measles. The jail is not kept as

clean as it should be and never is. The Home is in a little better condition than usual, but is not kept as it should be.

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Review of Diseases for May, 1895.

BOWEL DISEASES\* — From Buncombe, Craven, Cumberland, Forsyth, Gaston, Halifax, Lenoir, Martin, New Hanover, Pasquotank, Robeson and Sampson—12 counties.

BRONCHITIS—From Carteret, Davie, Edgecombe and Wake.

CHOLERA INFANTUM—From Caldwell.

CHOLERA IN CHICKENS—From Alleghany.

CHOLERA IN HOGS—From Anson, Beaufort, Bladen, Chowan, Halifax, Jones and Pitt—7 counties.

DIPHTHERIA—From Dare, Granville, and Macon.

DYSENTERY—From Cabarrus, Caldwell, Carteret, Duplin, Durham, Forsyth, Gaston, Greene, Halifax, Harnett, Pender, Perquimans, Richmond, Ruthersford and Sampson—15 counties.

INFLUENZA—From Bertie, Caldwell, Chatham, Durham, Person, Richmond and Union—7 counties.

MALARIAL FEVER — From Anson, Bertie, Brunswick, Cabarrus, Carteret, Chowan, Craven, Durham, Forsyth, Gaston, Jones, Lincoln, Mecklenburg, New Hanover, Pasquotank, Rowan, Sampson, Wake, Wayne and Wilson—20 counties.

MALARIAL FEVER, HEMORRHAGIC — From Pitt.

MALARIAL FEVER, PERNICIOUS—From Carteret and Dare.

MEASLES—From Davidson, Jones and Yancey.

MUMPS—From McDowell, Watauga and Yancey.

PNEUMONIA—From Anson, Caldwell, Chatham, Edgecombe, New Hanover, Person and Wake—7 counties.

RHEUMATISM—From Wake.

SCARLATINA—From Columbus, Craven, Iredell and New Hanover.

TONSILITIS—From Edgecombe.

TYPHOID FEVER—From Alleghany, Caldwell, Clay, Cleveland, Columbus, Dare, Gates, Hertford, McDowell, Madison, Martin, New Hanover, Tyrrell, Union, Vance, Wilkes and Yancey—17 counties.

\*DYSENTERY, when mentioned by reporters, is entered under a separate heading.

Summary of Mortuary Reports for May, 1895.

THIRTY TOWNS.

	White.	Col'd.	Total.
Aggregate population.....	87,650	61,754	149,404
Aggregate deaths.....	76	99	175
Representing annual death rate per 1000.....	10.4	19.2	14.0

*Causes of Death.*

Typhoid fever.....	0	2	2
Scarlet fever.....	2	0	2
Diphtheria.....	0	1	1
Measles.....	0	1	1
Pneumonia.....	2	6	8
Consumption.....	7	13	20
Brain diseases.....	17	8	25
Heart diseases.....	9	7	16
Neurotic diseases.....	3	0	3
Diarrhœal diseases.....	11	8	19
All other diseases.....	24	52	76
Accidents.....	0	1	1
Violence.....	1	0	1
	<hr/>	<hr/>	<hr/>
	76	99	175
Deaths under 5 years.....	9	28	37
Still-born.....	3	12	15

## Condition of Jails and County Homes by Counties for May, 1895.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance...	good	19 (a)				good	37			
Alexander .	§	0				good	9			
Alleghany...	fair	0				good	5	*	1	0
Anson.....	good					good				
Ashe.....	first rate	4	600		2	fair	9			2
Beaufort ....	fair	17				fair	13			
Bertie.....	very good	8 (d)			3	very good	18		1	2
Bladen.....	fair	2				fair	9			
Brunswick .	not good §	2	*	1	1	§	10	800	0	1
Buncombe .	fair	105 (b)	341-922	26	53	fair	32	441-884	21	12
Burke.....	fair §	10				well kept	14			
Cabarrus....	good	42 (c)	*	5	6	good	23	*	13	12
Caldwell....	very bad +	6	*	0	0	fair	2	*	0	1
Camden.....										
Carteret.....	+	2								
Caswell.....	fair	7 (d)				fair	24			
Catawba....	very good	8		2	5	very good	36		12	9
Chatham....	very good	7 (e)	*	2	4	very good	27	*	10	10
Cherokee....	very good	18				very good	2			
Chowan.....	good	2	*	0	0	good	6	*	0	1
Clay.....	good †	0								
Cleveland...	good		*			good	26	900		6
Columbus...	good	8	*		6	good	9	*		0
Craven.....	good	20	600	7	10	good	17	*	13	3
Cumberl'nd	good					good	19			
Currituck..										
Dare.....		0				fair	2			
Davidson....	fair §	6	*	0	4	fair §	26	720	0	2
Davie.....	well kept	2		0	1	well kept	7		1	0
Duplin.....	clean	0				clean	14	1,000	3	4
Durham.....	fair	41 (f)	1,378 (g)			fair	21	*		
Edgecombe	fair	13	*	2	4	fair	30	*	1	2
Forsyth.....	good	20	1,000	6	4	good	28	*	8	6

\* Space exceeds 1,000 cubic feet. § See Bulletin for April, 1895. † See Summary of Reports from County Superintendents in this issue. (a) All in House of Correction. (b) Includes 73 in House of Correction. (c) Includes 31 in House of Correction. (d) Includes 2 in House of Correction. (e) Includes 6 in House of Correction. (f) Includes 27 in House of Correction. (g) For House of Correction 420.



## Condition of Jails and County Homes by Counties.—(CONTINUED.)

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin .....	+	11				very good	29	*		2
Gaston .....	well kept					well kept				
Gates .....	good					good	9			
Graham .....										
Granville .....	good	2	600	0	2	good	28	600	9	7
Greene .....	good	1	500		1	good	10	1,000		1
Gulford .....	filthy	42 (a)	1,000 (b)			good	30	*		
Halifax .....	good	13	1,000	3	7	good	47	700	5	6
Harnett .....		0					0			
Haywood .....	good	10		0	9	good	10		0	
Henderson .....	good	5				good	3			
Hertford .....	fair	2	*	0	0	fair	7	*	0	0
Hyde .....										
Iredell .....	+	30 (c)	500 +			fair	32	500 +		
Jackson .....	§	6	*	0	4	good	2	*	0	0
Johnston .....	fair	3	*			good	16	1,000		
Jones .....	very good	4	*	0	3	good	3	*	2	2
Lenoir .....	very fair	4	*				0			
Lincoln .....	well kept	2	*			well kept	29	340		4
McDowell .....		0				good	13	*	0	1
Macon .....	only fair	7	825	4	4	good	11	1,000	3	7
Madison .....	better	17	400	7	10	good	19	600	9	6
Martin .....	good	2	*	0	0	good	15	*	5	3
Mecklenburg .....	good	110 (d)	800 (e)			good	75			
Mitchell .....	good					good				
Montgomery .....	good	2	500			good	15	500		
Moore .....	good	10	1,000	0	5	good	7	*	2	3
Nash .....	good	5	600	3	5	good	40	1,000	10	8
New Hanover .....		40 (f)	300	17	26	good		*		
Northampton .....	good	4	1,000	0	1	good	28	1,000	8	9
Onslow .....	fair	5				fair +	4			
Orange .....	fair	2	*			good	17	*		
Pamlico .....										

\* Space exceeds 1,000 cubic feet. § See Bulletin for April, 1895. + See Summary of Reports from County Superintendents in this issue. (a) Includes 32 in House of Correction. (b) House of Correction is far too crowded. (c) Includes 23 in House of Correction. (d) Includes 76 in House of Correction. (e) In House of Correction over 1,000. (f) Includes 12 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....		0				good	24	*		
Pender.....	good	2		0	2	good	5		0	0
Perquimans.....	good	2				good	9			
Person.....	bad	1	*			good	14	1,000		
Pitt.....	very good	7	500-750	1	1	very good	28	1,000	2	0
Polk.....	not good	4		0	0	good				
Randolph.....	very good	11				very good	34			
Richmond.....	only fair	28		4	11	good	24		3	8
Robeson.....	†	15				good	14			
Rockingham.....	good	11	913			good	44	500-700	20	
Rowan.....						fair	23	500 *	17	6
Rutherford.....	fair †	13	800			good	16	800		
Sampson.....	very good	5				very good	16			
Stanly.....	good	2	*	0	1	good	10	*	0	1
Stokes.....	good	8	600	3	2	good	16	600	4	5
Surry.....										
Swain.....	good	8				good	4			
Transylvania.....	good	2				good	4			
Tyrrell.....	good	1	*	0	1					
Union.....	good	12				good	27			
Vance.....	good	6	*	3	2	good	11	*	2	2
Wake.....		96 (a)	(b)				55			
Warren.....	very good	1	*		1	very good	17	*		3
Washington.....										
Watauga.....	very good	6				very good	7			
Wayne.....		8 (c)			2					
Wilkes.....	fair	8				fair	14			
Wilson.....	†	13	*	0	5	good	28	*	3	2
Yadkin.....	not good	2		0	1	good	20		0	7
Yancey.....	†	9	350	2	7	†	7	*		

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents in this issue. (a) Includes 61 in House of Correction. (b) Jail has been crowded by U. S. prisoners. (c) Includes 2 in House of Correction.

Mortuary Report for May, 1895.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping Cough.	Measles.	Pneumonia. Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrheal Diseases.	All other Diseases.	Accident. Suicide. Violence.	By Races.	By Towns.	TOTAL DEATHS under 5 years. Still Born.	
		By Races.	Total.	By Races.	Total.																	
Asheville..... Dr. H. L. Baird.	White. Colored.	8,000 4,000	12,000	7.5 6.0	7.0								3	1			1		5	1	1	3
Charlotte..... Fred. Nash, Esq.	White. Colored.	9,000 6,000	15,000	13.3 24.0	17.6							1	1		5	3			10	12		1
Durham..... Dr. J. M. Manning.	White. Colored.	4,500 3,500	8,000	5.3 0.0	3.0								1		1				2	2		
Fayetteville..... Dr. J. H. Marsh.	White. Colored.	2,800 2,200	5,000	17.1 10.9	14.4							1	1	1		1			4	6	1	
Goldsboro..... T. H. Bain, Esq.	White. Colored.	3,500 1,800	5,300	6.9 20.0	11.3						1		1			2			2	5	2	
Greensboro..... Dr. A. R. Wilson.	White. Colored.	5,500 2,500	8,000	8.7 33.6	16.5							1		2		1			4	11	4	
Henderson..... Dr. W. J. Judd.	White. Colored.	2,250 2,000	4,250	5.3 30.0	16.9									1			1		5	6	2	
Hillsboro..... Dr. C. D. Jones.	White. Colored.	400 300	700	0.0 0.0	0.0														0	0		
Jacksonville..... Dr. E. L. Cox.	White. Colored.	400 200	600	0.0 0.0	0.0														0	0		
Lenoir..... Dr. A. A. Kent.	White. Colored.	800 200	1,000	0.0 0.0	0.0														0	0		
Lexington..... Dr. R. L. Payne.	White. Colored.	1,800 400	2,200	0.0 0.0	0.0														0	0		
Marion..... Dr. B. A. Cheek.	White. Colored.	650 150	800	0.0 0.0	0.0														0	0		
Monroe..... Dr. J. M. Blair.	White. Colored.	1,800 600	2,400	0.0 0.0	0.0														0	0		
Oxford..... Dr. W. O. Baskerville.	White. Colored.	1,500 1,300	2,800	16.0 46.2	30.0			1				1	1		1	2			2	5	2	1
Pittsboro..... Dr. L. A. Hanks.	White. Colored.	350 250	600	0.0 0.0	0.0														0	0		
Raleigh..... Dr. Jas. McKee.	White. Colored.	8,500 7,500	16,000	11.3 16.	13.5		1					1	3	3		3		1*	8	18	1	1
Rockingham..... Dr. J. M. Covington.	White. Colored.	1,300 450	1,750	0.0 0.0	0.0														0	0		
Rocky Mount..... Dr. G. L. Wimberley.	White. Colored.	1,200 400	1,600	10.0 0.0	7.5								1						1	1		
Salem..... F. E. Keehn, Esq.	White. Colored.	3,942 342	4,284	6.6 35.1	8.4								2						2	3		
Salisbury..... Dr. John Whitehead.	White. Colored.	3,500 1,500	5,000	10.3 24.0	14.4							1	1		1	1			3	6	1	
Scotland Neck..... Mayor J. A. Perry.	White. Colored.	700 400	1,100	17.2 0.0	10.9											1			1	1		
Southport..... L. A. Galloway, Esq.	White. Colored.	750 450	1,200	0.0 0.0	0.0														0	0		
Statesville..... Dr. W. J. Hill.	White. Colored.	2,500 1,000	3,500	4.8 0.0	3.4		1												1	1		1
Tarboro..... Dr. Donald Williams.	White. Colored.	1,258 1,112	2,370	0.0 21.6	10.1												1	1	2	2		
Warrenton..... Dr. P. J. Macon.	White. Colored.	850 650	1,500	14.1 18.5	16.0									1					1	2		
Washington..... Dr. J. C. Rodman.	White. Colored.	3,000 2,500	5,500	28.0 28.9	28.4								3	1	3				7	13	4	
Weldon..... Mayor J. T. Gooch.	White. Colored.	700 750	1,450	0.0 48.0	24.8								1			2			0	3	2	
Wilmington..... Dr. R. D. Jewett.	White. Colored.	9,000 13,000	22,000	17.3 22.2	20.9								2	1	3				13	37	9	2
Wilson..... Dr. Albert Anderson.	White. Colored.	2,000 1,500	3,500	12.0 24.0	17.1							1	1			3			2	5	1	
Winston..... Dr. John Bynum.	White. Colored.	5,200 4,800	10,000	16.1 25.0	19.4								2	1	1	1	2		7	17	1	3

\* Hanged by law.

**METEOROLOGICAL SUMMARY FOR NORTH CAROLINA, MAY, 1895.**  
 Furnished by the North Carolina Agricultural Experiment Station and State  
 Weather Service.

H. B. BATTLE, PH. D., DIRECTOR.

C. F. VON HERRMAN, METEOROLOGIST.

TEMPERATURE. (DEGREES FAHR.)

NO. OF DAYS.

STATIONS.	Monthly Mean.		Mean Maximum.		Mean Minimum.		Monthly Range.	Mean Daily Range.	Mean Rel. Humidity.	Total Precipitation.	NO. OF DAYS.			
	Highest.	Date.	Lowest.	Date.	Mean Minimum.	Monthly Range.					Clear.	Partly Cloudy.	Cloudy.	Rainy.
Asheville.....	61.7	91 31	74.7	30 14	48.7	61	26.0	68.8	4.90	12	10	9	19	N
Bakersville...	56.6	89 31	72.4	30 14	40.8	59	31.6							
Blowing Rock...	53.8	78 31	65.2	29 14	42.3	49	22.9			15	7	9	8	N W
Charlotte.....	65.6	97 31	75.7	41 15	56.5	56	19.2	70.6	4.05	13	12	6	13	S W
Chapel Hill.....	65.1	98 31	75.9	38 14	54.3	60	21.6		3.99	10	14	7	13	W
Horse Cove.....	60.5	88 31	70.9	33 14	50.1	55	20.8		6.91	12	8	11	20	E
Littleton.....	64.4	99 31	74.6	37 14	54.3	52	20.3		2.74	15	2	14	16	N E
Lenoir.....	64.1	90 31	74.6	45 13	57.1	45	17.5		5.13	11	7	13	10	W
Lumberton.....	69.0	98 31	79.3	43 15	58.6	55	20.7		3.36				12	
Mt. Airy.....	62.2	94 31	73.8	36 13	50.7	58	23.1		3.67	11	8	12	11	S W
Mt. Pleasant.....	65.0	97 31	75.7	36 15	54.4	61	21.3		2.93	6	13	12	11	S W
Moncure.....	64.7	96 31	75.9	38 15	55.5	58	22.4		2.95	13	12	6	14	W
Newbern.....	68.0	96 31	77.8	42 15	58.2	54	19.6		4.67				12	
Oak Ridge.....	63.6	95 31	74.6	38 15	52.6	57	22.0		6.29	17	9	5	12	W
Pittsboro.....	61.8	93 31	72.1	37 15	51.4	56	20.7		2.71	11	8	12	8	S W
Raleigh.....	65.0	98 31	74.7	41 15	55.2	57	19.5	77.0	3.46	8	13	10	16	S W
Rockingham.....	67.9	96 31	7.93	38 15	56.5	58	22.8		2.58				7	
Roxboro.....	63.9	95 31	74.9	37 15	52.9	58	22.0		3.77	15	5	11	10	
Soapstone Mount.....	63.4	97 31	76.2	35 15	50.7	62	25.5		3.08	5	13	13	12	S W
Saxon.....	63.7	99 31	76.2	33 12	51.2	66	25.0		4.57	8	17	6	10	N E W
Southern Pines.....	67.0	98 31	76.4	41 15	57.7	57	18.7	77.2	2.07	18	6	7	10	S
Southport.....	67.6	88 31	75.1	43 15	60.0	35	15.1		6.86	17	6	7	11	S W
Sloan.....	67.2	97 31	77.9	39 15	56.4	58	21.5		3.45	8	6	17	14	S
Willeyton.....	65.0	98 31	76.5	40 15	53.6	58	22.9		5.98	11	7	13	11	S
Weldon.....	65.2	97 31	75.4	40 15	54.9	57	20.4		4.61	10	11	10	17	S
Wilmington.....	68.0	96 31	75.3	47 15	60.8	49	14.5	83.6	4.37	9	10	12	10	S

**State Meteorological Summary for May, 1895.**

Mean barometer 30.09 inches; normal for May 30.01. Highest barometer 30.34 on the 23rd at Raleigh. Lowest barometer 29.65 on the 12th at Kitty Hawk. Mean temperature 64.1 degrees; normal for May, 66.9. Highest temperature 99 on the 31st at Selma and Saxon. Lowest temperature 27 on the 13th at Highlands. Average rainfall 4.83 inches; normal for May 4.20 inches. Greatest monthly rainfall 7.79 inches at Linville; least monthly rainfall 2.07 inches at Southern Pines. Average number of clear days 12; partly cloudy 10; cloudy 9; rainy 13. Prevailing wind direction S. S. W. Average velocity 7.4 miles per hour. Normal direction for May, southwest; normal velocity 7.8 miles per hour. Frosts on 12th to 15th inclusive and on 23d. High temperatures on 31st exceeded anything before recorded except in May, 1880, when 100 was recorded at Weldon.

# BULLETIN

OF THE

# NORTH CAROLINA BOARD OF HEALTH.

*Published Monthly at the Office of the Secretary of the Board, at Raleigh, N. C.*

**SUBSCRIPTION. 25 CENTS A YEAR.**

GEO. G. THOMAS, M. D., <i>Pres.</i> ,.....	Wilmington.	W. P. BEALL, M. D.,.....	Greensboro.
S. WESTRAY BATTLE, M. D.,.....	Asheville.	W. J. LUMSDEN, M. D.,.....	Elizabeth City.
W. H. HARRELL, M. D.,.....	Williamston.	PROF. F. P. VENABLE,.....	Chapel Hill.
JOHN WHITEHEAD, M. D.,.....	Salisbury.	J. C. CHASE, CIV. ENG.,.....	Wilmington.
RICHARD H. LEWIS, M. D., <i>Secretary and Treasurer</i> , Raleigh.			

VOL. X.

JULY, 1895.

No. 4.

## Bacteriological Examinations.

At the conjoint-session of the Board with the State Medical Society at Greensboro, in May 1894, Passed Assistant Surgeon J. J. Kinyoun, who was present by invitation as the representative of the U. S. Marine Hospital Service, announced that the Service would be glad to give, in its laboratory at Washington, free of charge, a six-week's course of instruction in practical sanitary bacteriology, directed particularly to the biological examination of drinking waters, to duly accredited representatives of our Board. Drs. Albert Anderson, of Wilson, and W. T. Pate, of Gibson's Station, promptly signified their desire to avail themselves of the opportunity. They were duly appointed, and in January of the present year went to Washington where, at their own expense, they spent the full time in practical study and work under the immediate instruction of that eminent bacteriologist, Dr. Kinyoun.

Since their return they have each fitted up a laboratory and are now prepared to make biological examinations of drinking waters, and in suspected cases of tuberculosis and diphtheria. In acknowledgement of the courtesy of the Board in appointing them as its representatives they have agreed to a special arrangement for official work in drinking waters. Owing to our very small appropriation we are under the necessity of issuing permits for such examinations at the expense of the Board with much circumspection. To insure this, any physician suspecting a water as the cause of disease must first submit the matter to his County Superintendent of Health, or to the *Medical* health officer of his city or town, if it have one, who will write the facts and his opinion as to the necessity for the examination to the Secretary, and if in the latter's judgment the expense would be justified, a permit, with instructions for taking sample, will be sent to the applicant. Examinations made on this permit will

be paid for by the Board, but in every instance express charges must be prepaid by sender. County superintendents will please bear in mind the necessity for careful inquiry into all the facts before advising an examination, for the reason above stated. We would be very loth to refuse an application endorsed by a superintendent.

To our readers who are members of the State Medical Society Drs. Anderson and Pate need no introduction, but to those not acquainted with them it is proper to say that they are among the best men in that unusually strong body. Intelligent, earnest, pains-taking, scientific, they are worthy of confidence, and we trust that they may receive such support in private work (in regard to which information must be obtained from them direct) as will encourage them to persist in their valuable labors on this line.

In conclusion, we desire to express our appreciation of the enterprise and self-sacrifice shown by the gentlemen alluded to in this matter. It is now well known that the specific pathogenic qualities of infected drinking water cannot be ascertained with certainty by any other method than a bacteriological or biological examination, and it is a great gratification to feel that we have, right here at home, men competent to do this important work associated with the Board.

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#### Purification of Sewage-Polluted Waters by Sand Filtration.

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Those of our readers who do not see the admirable journal of the Massachusetts Association of Boards of Health will, we feel sure, thank us for giving them the pleasure of reading the following most interesting extract from

a paper on the above subject read by Prof. W. T. Sedgwick, at the April quarterly meeting of that body:

"With regard to the Purification of Sewage-polluted Waters I will say only a word or two. The matter may be stated rather briefly, something like this: Why do we attempt to purify sewage-polluted water? For two reasons: first, because such water is a nuisance; and, second, because it is apt to be dangerous to the public health. It certainly is dangerous to drink.

"How shall we go to work to purify it? Well, how does nature go to work? If the farmer puts upon his field barn-yard manure year after year, giving it a heavy dressing of the material, this is easily taken care of by the mother earth. No one knows or thinks that the farmer is creating a nuisance, the odor is not objected to by any one. On the contrary, every one of us feels a sort of primitive agricultural delight in the smell of good barn-yard manure thus utilized, and we have no objection to living in the neighborhood. I have seen the lawns on Commonwealth Avenue in Boston so covered with stable manure that one had almost to hold his nose in passing, and yet the same people who do not object to that odor would complain most bitterly of the slightest odor coming from a garbage pail or anything else of equally unsavory nature or origin. We know that the earth takes care of this organic matter. And the same is true of the conditions of the ordinary untidy country house or the tenement house, where the housewife, to get rid of her dish-water or slops, throws them out of the window. Unless that is done in excess, or for too long a time and under unfavorable circumstances, the earth takes care of all the stuff thus thrown out and little or no trouble ensues.

Here is a hint for the doing of the whole thing. The earth is capable of taking care of the organic matter, provided it does not have too much of it or have it for too long a time without change.

"We have arrived at this conclusion by experimentation. As long ago as 1839 London began to filter the highly polluted water of the river Thames through sand filters. It was supposed that by simply straining out the suspended matters and some of the dissolved matters the water would do no harm. Bacteria had not then been heard of. But time has gone on, and it has been found by making a study of the affair that, by putting sewage-polluted water on the land, with the right kind of soil, you can dispose of sewage on land as the farmer disposes of his barnyard manure; or, on the other hand, in the case of sewage-polluted water, that a larger volume of water can be treated, and then recovered through an underdrain and used for drinking.

"As an example of the first case, the city of Berlin, a city of a million and six or seven hundred thousand population, disposes of its sewage upon the land. The river Spree runs through the city, but does not receive the sewage except in times of storms, when the overflow goes into the river. The sewage ordinarily is disposed of upon the land; and the same principle is applied as here in Brockton—namely, the putting of a thin layer of sewage upon the soil, and letting the earth take care of it. In the case of Berlin they make use of the sewage-impregnated soil to raise crops; but, when you commence to raise crops at the place where the filtering is going on, you must remember that you cease to operate the filter to its highest capacity. In Berlin they

raise cabbages and other vegetables, where the sewage of sixteen or seven-hundred thousand people is disposed of on the land; and the effluent water, as it comes out below, is used for drinking. Here is an instance of the disposition of sewage in this way on a large scale. And if any one says that Brockton's plan is only an experiment, and that no one can say how long it is going to continue satisfactorily, or how it will be in fifteen or twenty years from now, we may reply that Berlin has been doing the same thing for years, and there is no uncertainty about it; that the mother earth, when the place is rightly chosen and the operation is properly managed, will take care of any amount of organic matter which you may wish to put upon it.

"When you come to water purification, there is the same problem with certain modifications. Sewage is water gone bad, water with excess of foul matters,—such as we saw to-day,—which sewage was not ordinary sewage, but thinner, yet for my purpose answers well enough, because I may point to those filter-beds, and show you sewage-polluted water purified there by sand filtration. It was sewage, so called. It was really sewage-polluted water; and that is what sewage always is. The sewage of Berlin is so polluted that it becomes almost as black as ink, and is as thick as thin mud. I have seen it of that character on the filter fields of Berlin, like thin black mud or thick ink. Now in such a case, ordinarily, there is one unfavorable condition: the sewage does not contain any oxygen. These filters are not strainers, they are not mere heaps of sand; but when in good working order, they are rather like living organisms, for they are filled with bacteria which breathe and feed, taking up the organic mat-

ters of the sewage. Oxygen being available, the bacteria resident in the sand feed upon the organic matters, and reduce them to similar matters of a mineral sort, and their organic character is lost. It is as if those filter-beds were a gigantic living sponge. You know the sponge before it is gathered is a living mass permeated by narrow channels. And, if we imagine one of these filters to be a heap of sand, swarming with living bacteria, we can see how easy it is for the sewage-polluted water to flow into this great sponge, and for the living contents of the latter to feed upon the matters it contains. When the filters are water filters, they work more freely, because ordinary water is saturated with oxygen.

"The theory becomes comparatively simple when looking at these filters, if one does not regard them as mere sand, but rather as something which would remind us of London and Paris with their dense populations, great centres teeming with multitudes of individuals. The sewage that arrives they receive with open arms, taking from it the organic matters which are their food, and working them over into mineral matters, which, in solution, pass off below. So the purification of sewage-polluted water is pretty much the same thing as the purification of sewage, only the work is done faster because of the oxygen in the water. You have an example of this in the city of Lawrence, where you have heard of the municipal filter designed by Mr. H. F. Mills, of the State Board of Health. That city is now supplied with water fit for drinking, purified by simple sand filtration in a bed two and a half acres in extent. It is not merely a bed of sand, but contains a vast multitude of bacteria, feeding there upon this

impure water, which, after it is filtered, goes into a reservoir pure and clear. We may see how the thing works as far as can be seen with the naked eye, but for scientific purposes we must take a microscope; and we shall then find every grain of sand in this great filter coated with bacterial jelly, and bacteria actively at work doing their part in the process. If we wish to see what has been accomplished in this way, we can compare the death-rate in Lawrence as it is now with the death rate which prevailed before the filter went into operation. Lawrence, instead of standing higher than any other city in the Commonwealth in deaths from typhoid fever, as it did, stands now on a par with those cities which are furnished with a good water supply and having similar industries and climate; and its bad reputation as a breeder of typhoid fever has disappeared. Typhoid fever is no longer "endemic" in Lawrence; it is only occasional and sporadic, as it is in Haverhill, Brockton, Lynn, and all other cities with good water supplies. There are a few cases arising from the use of water taken unfiltered from the river, and a few imported cases, and also cases from using bad milk and from other sources; but the death-rate of Lawrence from typhoid fever now compares favorably with that of other cities of its own size, character and situation having perfect water supplies. In other words, sewage-polluted water that is purified is not objectionable, but safe. The same thing is true of London, which for many years has been supplied with sewage-polluted water thus purified. The death-rate of London from typhoid fever is very low.

"In looking at these so-called intermittent filters, then, one should take out of his mind any idea that they are



mere heaps of sand. Every grain of that sand has on it thousands of bacteria which have taken up their residence there in a jelly-like form, so that the total effect is softness of the soil, because of this great aggregate of bacterial life. It is bacterial life which takes care of the farmer's manure spread upon the earth, and of the dish water thrown out of the window by the careless housewife, and of the sewage which is spread on fields, as you have seen it to-day."

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INFECTION by flies was illustrated at a recent meeting of the Royal Society in London, with sections of potatoes which were covered with brilliant red streaks and rosettes of a growth of *bacillus prodigiosus* planted by the feet of a fly, in the following manner. The fly having been allowed to walk a few times over a slice of potato covered with a culture of this bacillus, is kept for a while, and then made to walk over a sterilized slice of potato, which, after a proper period of incubation, displays a luxuriant bacillary growth, actually revealing the path and tracks of the fly, so abundantly were the microbes taken up and transported by the feet of the insect. Winged infection is hard to quarantine. It would be much easier to prevent its inception.—*San. Era.*

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Summary of Reports from County Superintendents of Health for June, 1895, (eighty nine counties reporting.)

In the blanks on which these reports are made the following items are called for:

1. The number of cases of small-pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious

malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.

2. The diseases which have been prevalent in the county and in what parts.

3. Epidemics among domestic animals.

4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. One mild case of scarlatina which is convalescing. Condition of public buildings as good as it can be made under the circumstances.

ALEXANDER—Dr. R. B. Killiam, Taylorsville. Very little sickness.

ALLEGHANY—Dr. C. G. Fowlkes, Topia. Three cases of measles. Whooping-cough in south-eastern part. An epidemic of chicken cholera. Some places in the county need better drainage. The court house is being repaired.

ANSON—Dr. E. S. Ashe, Wadesboro. Very little sickness. Some malarial fever and a few cases of diarrhoea and dysentery of mild form.

ASHE—Dr. L. C. Gentry, Jefferson. Some typhoid fever in north-east part, and mild sporadic dysentery in the north-west. Otherwise, health excellent. The Home was lately improved by the addition of two new rooms.

BEAUFORT—Dr. John C. Rodman,

Washington. One case of scarlatina and two of typhoid fever. Malarial disorders. Some cholera in hogs. Many places in county need drainage.

BERTIE—Dr. H. V. Dunston, Windsor. Health excellent. Chills and fever in some parts. An epidemic of hog cholera.

BLADEN—Dr. Newton Robinson, Elizabethtown. Very little sickness. Cholera in hogs and chickens in nearly all parts.

BRUNSWICK—Dr. D. I. Watson, Southport. No special diseases. The public buildings are all in great need of repair, and the Home should be removed nearer the county seat. It is now 18 miles distant.

BUNCOMBE—Dr. H. L. Baird, Asheville. Bowel troubles to a slight extent in all parts.

BURKE—Dr. J. L. Laxton, Morganston. No sickness except a few cases of diarrhœa, chiefly among children.

CABARRUS—Dr. Leona M. Archey, Concord. Malarial fevers, diarrhœa and dysentery in many parts.

CALDWELL—Dr. A. A. Kent, Lenoir. Remarkably healthy. A few mild cases of diarrhœa.

CAMDEN—No Board of Health.

CARTARET—Dr. Geo. N. Ednett, Beaufort. Bowel troubles in most parts.

CASWELL—Dr. W. O. Spencer, Yanceyville. Little sickness. Some bowel troubles. The jail is in fair condition with the exception of the furnace basement, which is in a very unsanitary state. This has been reported to the authorities and it is hoped it will receive prompt attention.

CATAWBA—Dr. J. M. McCorkle, Newton. Health of county for the last six months very good.

CHATHAM—Dr. L. A. Hanks, Pittsboro. Little sickness. Influenza to a limited extent in some parts.

CHEROKEE—Dr. J. F. Abernathy, Murphy. The people generally have awakened to a sense of the importance of cleanliness in this section; hence good health prevails.

CHOWAN—Dr. R. H. Winborne, Rockahock. A few cases of mumps in Second township. Some cholera morbus, diarrhœa and dysentery.

CLAY—Dr. W. E. Sanderson, Hayesville. Influenza among horses.

CLEVELAND—Dr. O. P. Gardner, Shelby. Health remarkably good.

COLUMBUS—Dr. I. Jackson, Whiteville. A few cases of typhoid fever. An epidemic of hog cholera from several parts. Mild malarial fever and diarrhœa in different sections.

Craven—Dr. Leinster Duffy, Newbern. Two cases of scarlet fever and four of whooping cough. Malarial and typhoid fevers have occurred.

CUMBERLAND—Dr. J. H. Marsh, Fayetteville. A few cases of typhoid fever. Malarial fever and diarrhœa diseases in some parts.

CURRITUCK—No Board of Health.

DARE—Dr. W. H. Peterson, Manteo. Two cases of typhoid fever and five of pernicious malarial fever.

DAVIDSON—Dr. R. L. Payne, Lexington. Whooping cough has prevailed.

DAVIE—Dr. James McQuire, Mocksville. No diseases reported.

DUPLIX—Dr. W. P. Kennedy, Warsaw. Colds and malarial fever in some parts. Sufficient attention is not paid to drainage and drinking water. Many deep wells are being bored along the railroad and I hope to see malarial fever banished.

DURHAM—Dr. J. M. Manning, Durham. Three cases of whooping cough. Diarrhœa and dysentery in nearly all parts, especially among children. Most of the convicts are camping out on the county roads.

EDGECOMBE—Dr. Donald Williams, Tarboro. Three cases of typhoid fever. Intermittent fever in all parts.

FORSYTH—Dr. D. N. Dalton, Winston. A few cases of typhoid fever. Mild intermittent and remittent fevers in all parts.

FRANKLIN—Dr. E. S. Foster, Laurinburg. As little sickness as ever before known. Some mild cases of dysentery. The sanitary condition of the public buildings is as good as can be under existing circumstances. Changes are demanded in jail which I am striving with the authorities to get.

GASTON—Dr. J. H. Jenkins, Dallas. Colds. One case of pneumonia and one of typhoid fever. Malarial fevers still prevail, much of which is caused by the bad drainage along Big Long creek.

GATES—Dr. I. W. Costen, Gatesville. No diseases reported.

GRAHAM—No Board of Health.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. No diseases to report.

GREENE—Dr. E. H. Sugg, Snow Hill. Malarial fever and dysentery.

GUILFORD—Dr. A. R. Wilson, Greensboro. One case of typhoid fever. The county has furnished the convicts with a tent containing 19,800 cubic feet of space. This is much more comfortable and healthy than crowding them into small, ill-ventilated rooms as heretofore. Water-closets have been at last put into each jail cell and connection has been made with the city sewer.

HALIFAX—Dr. I. E. Green, Weldon.

Malarial diseases and bowel diseases among children in some parts.

HARNETT—Dr. J. F. McKay, Dickin-son. Very little sickness. A few cases of dysentery.

HAYWOOD—Dr. J. Howell Way, Waynesville. Comparatively little sickness.

HENDERSON—Dr. J. L. Egerton, Hendersonville. A few cases of diarrhœa.

HERTFORD—Dr. John W. Tayloe, Union. More cases of typhoid fever. Diarrhœa and dysentery in some parts. Hog cholera in limited areas.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. Two cases of scarlatina and two of typhoid fever. Bowel troubles. The citizens on Fourth creek between Bostian's bridge and Keistler's bridge have arranged to clean out the creek and drain the swamps.

JACKSON—Dr. W. F. Tompkins, Webster. Mumps and dysentery in central part. Hydrophobia among dogs.

JOHNSTON—Dr. R. J. Noble, Selma. Very little sickness. Some hog cholera.

JONES—Dr. R. A. Whitaker, Trenton. Malaria in mild form in all parts. A few cases of severe dysentery.

LENOIR—Dr. C. B. Woodley, Kingston. A few cases of mumps, measles and intermittent fever, and many cases of diarrhœa among children.

LINCOLN—Dr. W. L. Crouse, Lincoln-ton. Ten cases of whooping-cough. Dysentery in all parts. Health of county good.

MCDOWELL—Dr. B. A. Cheek, Marion. Whooping-cough and bowel troubles.

MACON—Dr. S. H. Lyle, Franklin. One case of diphtheria. A few cases of diarrhœa. Very little sickness.

MADISON—Dr. Jas. K. Hardwicke, Marshall. Health remarkably good.

MARTIN—Dr. W. H. Harrell, Williamston. One case of typhoid fever.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. One case of scarlatina and one of typhoid fever. The creeks around Charlotte are in an unsanitary condition from the discharge of sewerage into them. The city authorities have taken steps to remedy it.

MITCHELL—Dr. C. E. Smith, Bakersville. Some typhoid fever.

MONTGOMERY—Dr. W. A. Simmons, Troy. Healthy, except bowel diseases to some extent in most parts.

MOORE—Dr. Gilbert McLeod, Carthage. Diarrhœa, dysentery and cholera morbus in all parts. Some malarial fever in one or two localities. The cells in jail are not sufficiently ventilated for hot weather.

NASH—Dr. J. J. Mann, Nashville. Very little sickness, Dysentery in some parts.

NEW HANOVER—Dr. R. D. Jewett, Wilmington. Three cases of typhoid and one of hemorrhagic malarial fever. Cholera infantum and other bowel troubles mentioned by all reporters.

NORTHAMPTON—Dr. H. W. Lewis, Jackson. Very little sickness.

ONSLow—Dr. E. L. Cox, Jacksonville. Malarial fever.

ORANGE—Dr. C. D. Jones, Hillsboro. Malarial fever in some parts.

PAMLICO—No Board of Health.

PASQUOTANK—Dr. W. W. Griggs, Elizabeth City. No sickness to report.

PENDER—Dr. Geo. F. Lucas, Currie. One case of scarlet fever and one of typhoid fever. Light malarial fever in the eastern part. The sanitary condition of the county is gradually improving.

PERQUIMANS—Dr. John F. Speight, Hertford. Dysentery and remittent fever.

PERSON—Dr. C. G. Nichols, Roxboro. No sickness of consequence. Some diarrhœa.

PITT—Dr. W. H. Bagwell, Greenville. Malarial fever and dysentery in all parts. Hog cholera in nearly all parts.

POLK—Dr. Earl Grady, Tryon. Cholera infantum in a limited area. The jail has been in a miserable condition but has been cleaned and refitted and is much improved.

RANDOLPH—Dr. J. M. Boyette, Ashboro. Three cases of typhoid fever. Some diarrhœa and dysentery in all parts, and have been almost epidemic at Randleman and Ramseur.

RICHMOND—Dr. J. M. Covington, Rockingham. No report.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. Whooping-cough, not extensive. The jail is a little too crowded.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. Two cases of measles and two of typhoid fever.

ROWAN—Dr. John Whitehead, Salisbury. Ten cases of whooping-cough and two of typhoid fever. Malarial fevers in most parts.

RUTHERFORD—Dr. W. A. Thompson, Rutherfordton. Mild dysentery in all parts.

SAMPSON—Dr. Jno. A. Stevens, Clinton. Diarrhœa and dysentery. A few cases of malarial fever.

STANLY—Dr. W. P. Whitley, Millingport. Six cases of measles and one of typhoid fever. Very little sickness except unusually mild bowel disorders.

STOKES—Dr. William V. McCannless, Danbury. Whooping-cough in all parts.

**SURRY**—Dr. J. B. Hollingsworth, Mt. Airy. No sickness to report.

**SWAIN**—Dr. R. L. Davis, Bryson City. One case of typhoid fever.

**TRANSYLVANIA**—Dr. C. W. Hunt, Brevard. Good health in all parts.

**TYRRELL**—Dr. Ab. Alexander, Columbia. No sickness to report.

**UNION**—Dr. J. E. Ashcraft, Monroe. One case of diphtheria and four of typhoid fever. Bilious diarrhœa in town and country.

**VANCE**—Dr. W. T. Cheatham, Henderson. Two cases of typhoid fever.

**WAKE**—Dr. P. E. Hines, Raleigh. One case of typhoid fever. Two cases of cerebro-spinal meningitis reported to the city authorities. Dr. Kirby reports the health of the Insane Asylum good "except for the mill pond south of us, with cases of intermittent fever." Some cholera in hogs at the same institution. Some dysentery in various parts. Dr. Templeton, of Cary, reports four cases of peritonitis, two of them in the same house. Five reports received.

**WARREN**—Dr. P. J. Macon, Warrenton. A few cases of measles. Malarial fever in some parts and dysentery in all. The Home has been whitewashed inside and out and the bedding and furniture thoroughly disinfected.

**WASHINGTON**—No Board of Health.

**WATAUGA**—Dr. W. B. Councill, Boone. No sickness in any part.

**WAYNE**—Dr. W. J. Jones, Jr., Goldsboro. Five cases of measles. Malarial troubles in all parts.

**WILKES**—Dr. J. W. White, Wilkesboro. Whooping cough and typhoid fever in some parts.

**WILSON**—Dr. A. Anderson, Wilson. Diarrhœa and dysentery in all parts.

**YADKIN**—Dr. T. R. Harding, Yadkinville. No sickness of note.

**YANCEY**—Dr. J. L. Ray, Burnsville. Two cases of typhoid fever. The jail is in better condition than it has been in for some time but is not clean enough yet. The Home is about as usual, not kept as clean as it should be.

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#### Review of Diseases for June, 1895.

**BOWEL DISEASES**\* — From Anson, Buncombe, Burke, Cabarrus, Caldwell, Cartaret, Caswell, Chowan, Columbus, Cumberland, Durham, Halifax, Henderson, Hertford, Iredell, McDowell, Macon, Montgomery, Moore, New Hanover, Person, Polk, Randolph, Sampson, Union and Wilson—26 counties.

**CHOLERA, IN CHICKENS**—From Alleghany and Bladen.

**CHOLERA, IN HOGS**—From Beaufort, Bertie, Bladen, Hertford, Johnston, Pitt and Wake.

**DIPHThERIA**—From Macon and Union.

**DYSENTERY** — From Anson, Ashe, Cabarrus, Chowan, Durham, Franklin, Greene, Harnett, Jackson, Jones, Lincoln, Moore, Nash, Perquimans, Pitt, Randolph, Rutherford, Sampson, Wake, Warren and Wilson—21 counties.

**HYDROPHOBIA**—From Jackson.

**INFLUENZA**—From Chatham.

**INFLUENZA, IN HORSES**—From Clay.

**MALARIAL FEVER** — From Anson, Beaufort, Bertie, Cabarrus, Columbus, Craven, Cumberland, Davie, Edgecombe, Forsyth, Gaston, Greene, Halifax, Lenoir, Moore, Onslow, Orange, Pender, Perquimans, Pitt, Rowan, Sampson, Wake, Warren and Wayne—25 counties.

MALARIAL FEVER, HEMMORRHAGIC  
—From New Hanover.

MALARIAL FEVER, PERNICIOUS—  
From Dare.

MEASLES—From Alleghany, Lenoir,  
Rockingham, Stanly, Warren and  
Wayne.

MENINGITIS, CEREBRO-SPINAL —  
From Wake.

MUMPS—From Chowan, Jackson and  
Lenoir.

PNEUMONIA—From Gaston.

SCARLATINA — From Alamance,  
Beaufort, Craven, Iredell, Mecklen-  
burg and Pender—6 counties.

TYPHOID FEVER—From Ashe, Beau-  
fort, Columbus, Craven, Cumberland,  
Dare, Edgecombe, Forsyth, Gaston,  
Guilford, Hertford, Iredell, Martin,  
Mecklenburg, Mitchell, New Hanover,  
Pender, Randolph, Rockingham, Row-  
an, Stanly, Swain, Union, Vance,  
Wake, Wilkes and Yancey—27 coun-  
ties.

WHOOPING-COUGH—From Allegha-  
ny, Craven, Davidson, Durham, Lin-  
coln, McDowell, Robeson, Rowan,  
Stokes and Wilkes—10 counties.

\* Dysentery, when mentioned by reporters,  
is entered under a separate heading.

Summary of Mortuary Reports for June, 1895.

TWENTY-NINE TOWNS.

	White.	Col'd.	Total.
Aggregate population.....	86,792	61,592	148,384
Aggregate deaths.....	105	131	236
Representing annual death rate per 1000.....	14.5	25.5	19.0

*Causes of Death.*

Typhoid fever.....	0	6	6
Scarlet fever.....	1	0	1
Malarial fever.....	1	2	3
Whooping Cough.....	1	0	1
Pneumonia .....	4	5	9
Consumption .....	12	26	38
Brain diseases .....	18	7	25
Heart diseases .....	5	6	11
Neurotic diseases .....	1	2	3
Diarrhoeal diseases.....	21	27	48
All other diseases.....	36	45	81
Accident .....	5	5	10
	105	131	236
Deaths under 5 years.....	44	56	100
Still-born.....	10	11	21

Condition of Jails and County Homes by Counties for June, 1895.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance...	good †	23 (a)				good †	32			
Alexander...	no change	0				no change	8			
Alleghany...	fair	0				good	5	*	1	
Anson.....	good					good				
Ashe.....	good	2				improved	9			1
Beaufort.....		8					12			
Bertie.....	very good	5 (b)				very good	18		1	3
Bladen.....	fair	1				fair	9			
Brunswick...	†	2	*	1	1	†	8	*	0	0
Buncombe...	only fair	113 (c)	145-525(d)	38	64	good	32	441-882	24	14
Burke.....	no change	10				no change	14			
Cabarrus....	first-class	39 (e)	*	3	19	first-class	24	*	13	12
Caldwell....	improv'd†	6	*	0	2	fair	3	*	0	0
Camden.....										
Carteret.....	fair	0				fair	0			
Caswell.....	fair †	5 (f)				very good	24			
Catawba....	very good	8		2	5	very good	36		9	12
Chatham....	excellent	14 (g)	*	3	9	excellent	29	*	10	10
Cherokee....	fine	15				fine	2			
Chowan.....	well kept	7	*			well kept	5	*	2	0
Clay.....		0					0			
Cleveland...	good	10				good	27			
Columbus...	good	9	*		7	good	9	*		0
Craven.....		15	750	5	7		20	*	15	3
Cumberl'nd.....		7					16			
Currituck...										
Dare.....	fair	0				fair	3	*		
Davidson....	no change	7	*	0	0	no change	26	720	3	0
Davie.....	well kept	5		0	1	well kept	6		1	0
Duplin.....	clean	1	1,000		1	clean	13	1,000	3	3
Durham.....		35 (h)	* (i)				21	*		
Edgecombe...	fair	10	*	4	3	fair	26	*	3	2
Forsyth.....	good	16	1,000	8	4	good	28	*	10	3

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents. (a) Includes 19 in House of Correction. (b) All in House of Correction. (c) Includes 63 in House of Correction. (d) For House of Correction 120-300. (f) Includes 1 in House of Correction. (g) Includes 7 in House of Correction. (h) Includes 27 in House of Correction. (i) In House of Correction 400.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin .....	†	7	.....	.....	.....	†	29	*	.....	2
Gaston .....	well kept	.....	.....	.....	.....	well kept	.....	.....	.....	.....
Gates .....	good	.....	.....	.....	.....	good	9	.....	.....	.....
Graham .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Granville.....	good	4	600	0	4	good	26	600	3	5
Greene .....	good	2	500	.....	1	good	10	1,000	.....	1
Guilford .....	improved	40 (f)	680	.....	.....	good	29	*	.....	.....
Halifax.....	.....	6	.....	3	3	.....	46	.....	6	5
Harnett.....	good	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haywood .....	good	8	.....	0	5	good	8	.....	.....	.....
Henderson .....	.....	6	.....	.....	.....	.....	3	.....	.....	.....
Hertford .....	.....	3	*	0	0	.....	7	*	0	2
Hyde .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iredell .....	unch'ng'd	30 (a)	500	.....	.....	unch'ng'd	21	500	.....	.....
Jackson .....	very good	8	990	0	4	very good	2	423	0	0
Johnston .....	.....	7	1,000	.....	.....	.....	17	*	.....	.....
Jones .....	.....	4	*	0	2	.....	3	*	0	2
Lenoir .....	.....	7	*	.....	5	.....	.....	.....	.....	.....
Lincoln.....	well kept	3	*	.....	.....	well kept	33	300	.....	6
McDowell.....	.....	0	.....	.....	.....	good	10	.....	0	1
Macon .....	not good	4	1,000	0	3	well kept	12	750	3	7
Madison.....	crowded	20	300	6	8	good	17	500	9	6
Martin.....	good	2	*	0	1	good	15	*	5	4
Mecklenburg ..	clean	130 (b)	400 (c)	.....	.....	very good	78	*	.....	.....
Mitchell .....	.....	10	.....	.....	.....	.....	10	.....	.....	.....
Montgomery....	good	2	500	.....	2	good	14	500	.....	6
Moore .....	†	8	*	0	5	good	7	*	1	3
Nash.....	very good	3	600	3	3	very good	36	1,000	6	8
New Hanover ..	.....	40 (d)	400 (e)	.....	.....	.....	25	*	.....	.....
Northampton ..	good	4	1,000	0	1	good	28	1,000	8	9
Onslow .....	good	5	.....	.....	.....	good	3	.....	.....	.....
Orange .....	good	1	.....	.....	.....	good	17	.....	.....	.....
Pamlico .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents. (a) Includes 22 in House of Correction. (b) Includes 95 in House of Correction. (c) Prisoners in House of Correction are in open tents. (d) Includes 12 in House of Correction. (e) For House of Correction 300. (f) Includes 24 in House of Correction.



Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....		2								
Pender.....	fairly good	2		0	2	fairly good	4		0	0
Perquimans.....		1					9			
Person.....	bad	1	1,000			good	15	800		3
Pitt.....	good	8				good	28			
Polk.....	improv'd†	7	*	5	3					
Randolph.....	good	11				good	34			
Richmond.....										
Robeson.....	†	20				good	13			
Rockingham..	good	12	1,000			good	39	400-700	18	
Rowan.....		10	500	9	7		22	500+	17	11
Rutherford.....		18					16			
Sampson.....	excellent	6				excellent	17			
Stanly.....							9	*	0	1
Stokes.....	good	8	700	2	4	good	12	600	3	5
Surry.....	good	7	720	0	3	good	20	700	0	2
Swain.....	good	12				good	4			
Transylvania..	good	2				good	4			
Tyrrell.....	good	0				good	1			
Union.....	good	8				good	25			
Vance.....	excellent	6	*	2	2	excellent	11	*	2	1
Wake.....	good	89 (a)	§			good	60			
Warren.....	very good	2	*		2	very good†	17	*		3
Washington.....										
Watauga.....	very good	4				very good	7			
Wayne.....	good	9			3	good	11			1
Wilkes.....	fair	9				fair	14			
Wilson.....	good	2	*	0	0	good	25	*	5	4
Yadkin.....	fair	1				good	20			
Yancey.....	improv'd†					†				

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents.  
 § Varies every day. (a) Includes 69 in House of Correction.

## Mortuary Report for June, 1895.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping Cough.	Measles.	Pneumonia. Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrhœal Diseases.	All Other Diseases.	Accident. Suicide.	Violence.	By Races.	By Towns.	TOTAL DEATHS. Deaths under 5 years. Still born.	
		By Races.	Total.	By Races.	Total.																		
Asheville.....	White.	8,000	12,000	13.5	17.0																		
Dr. H. L. Baird.	Colored.	4,000		24.0																	9	17	1
Charlotte.....	White.	9,000	15,000	22.7	29.6																17	37	11
Fred. Nash, Esq.	Colored.	6,000		40.0		1	1														20	37	7
Durham.....	White.	4,500	8,000	5.3	4.2																		
Dr. J. M. Manning.	Colored.	3,500		3.4																			
Fayetteville.....	White.	2,800	5,000	17.1	12.0																		
Dr. J. H. Marsh.	Colored.	2,200		5.4																			
Goldsboro.....	White.	3,500	5,300	0.0	4.5																		
T. H. Bain, Esq.	Colored.	1,800		13.3																			
Greensboro.....	White.	5,500	8,000	10.9	21.0																		
Dr. A. R. Wilson.	Colored.	2,500		43.2		1																	
Henderson.....	White.	2,250	4,250	10.7	14.1																		
Dr. W. J. Judd.	Colored.	2,000		18.0																			
Hillsboro.....	White.	400	700	0.0	0.0																		
Dr. C. D. Jones.	Colored.	300		0.0																			
Jacksonville.....	White.	400	600	0.0	0.0																		
Dr. E. L. Cox.	Colored.	200		0.0																			
Lenoir.....	White.	800	1,000	15.0	12.0																		
Dr. A. A. Kent.	Colored.	200		0.0																			
Lexington.....	White.	1,800	2,100	6.7	5.7																		
Dr. R. L. Payne.	Colored.	300		0.0																			
Marion.....	White.	650	800	0.0	0.0																		
Dr. B. A. Cheek.	Colored.	150		0.0																			
Monroe.....	White.	1,800	2,400	0.0	5.0																		
Dr. J. M. Blair.	Colored.	600		20.0																			
Oxford.....	White.	1,600	3,000	7.5	8.0																		
Dr. W. O. Baskerville.	Colored.	1,400		8.6																			
Pittsboro.....	White.	350	600	0.0	0.0																		
Dr. L. A. Hanks.	Colored.	250		0.0																			
Raleigh.....	White.	8,500	16,000	24.0	24.7																		
Dr. Jas. McKee.	Colored.	7,500		25.6																			
Rocky Mount.....	White.	1,200	1,600	20.0	15.0																		
Dr. G. L. Wimberley.	Colored.	400		0.0																			
Salem.....	White.	3,942	4,284	9.1	11.2																		
F. E. Keehn, Esq.	Colored.	342		32.2																			
Salisbury.....	White.	3,500	5,000	13.7	19.2																		
Dr. John Whitehead.	Colored.	1,500		32.0																			
Scotland Neck.....	White.	700	1,100	17.1	21.8																		
Mayor J. A. Perry.	Colored.	400		30.0																			
Southport.....	White.	750	1,200	32.0	40.0																		
L. A. Galloway, Esq.	Colored.	450		53.3																			
Statesville.....	White.	2,500	3,500	9.6	10.3																		
Dr. W. J. Hill.	Colored.	1,000		12.0		1																	
Tarboro.....	White.	1,300	2,500	2.8	14.4																		
Dr. Donald Williams	Colored.	1,200		0.0																			
Warrenton.....	White.	1,150	2,000	0.0	0.0																		
Dr. P. J. Macon.	Colored.	850		0.0																			
Washington.....	White.	3,000	5,500	24.0	28.4																		
Dr. J. C. Rodman.	Colored.	2,500		33.6		2																	
Weldon.....	White.	700	1,450	0.0	0.0																		
Mayor J. T. Gooch.	Colored.	750		0.0																			
Wilmington.....	White.	9,000	22,000	21.3	26.2																		
Dr. R. D. Jewett.	Colored.	13,000		29.5		2																	
Wilson.....	White.	2,000	3,500	18.0	27.4																		
Dr. Albert Anderson	Colored.	1,500		40.0																			
Winston.....	White.	5,200	10,000	9.2	24.0																		
Dr. John Bynum.	Colored.	4,800		40.0		1																	

\* Four of these were visitors.

**METEOROLOGICAL SUMMARY FOR NORTH CAROLINA, JUNE, 1895.**  
 Furnished by the North Carolina Agricultural Experiment Station and State  
 Weather Service.

H. B. BATTLE, PH. D., DIRECTOR.

C. F. VON HERRMAN, METEOROLOGIST.

STATIONS.	TEMPERATURE, (DEGREES FAHR.)								Mean Rel. Humidity.	Total Precipitation.	NO. OF DAYS.					
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.			Mean Daily Range.	Clear.	Partly Cloudy.	Cloudy.	Rainy.	Prevailing Wind.
Asheville.....	69.9	94	3	83.3	48	18	56.5	46	26.8	61.7	2.33	21	7	2	7	N W
Bakersville.....	67.8	94	3	83.3	39	18	52.4	55	30.9	.....	3.35	.....	.....	.....	4	.....
Blowing Rock.....	66.1	85	2	75.6	45	17	56.7	40	18.9	.....	0.94	26	4	2	6	S W
Charlotte.....	76.2	100	3	87.1	55	18	65.4	45	21.7	65.6	2.70	14	13	3	12	E
Chapel Hill.....	76.8	101	2	89.7	49	18	64.0	52	25.7	.....	4.60	15	12	3	8	W
Horse Cove.....	71.0	90	1	82.7	45	18	59.5	45	23.2	.....	5.30	16	10	4	12	N E
Littleton.....	76.6	102	3	89.9	47	17	63.4	55	26.5	.....	5.18	10	5	12	9	N E
Lenoir.....	73.3	92	1	82.0	57	19	66.6	35	15.4	.....	1.69	11	12	7	7	W
Louisburg.....	76.2	100	4	88.0	50	18	64.4	50	23.6	.....	3.16	.....	.....	.....	8	.....
Mt. Airy.....	71.7	98	4	85.3	46	18	58.3	52	27.0	.....	4.99	11	14	5	10	S W
Mt. Pleasant.....	75.0	97	2	86.4	51	18	63.7	46	22.7	.....	5.00	10	8	12	11	S W
Mocksville.....	74.3	94	3	83.7	54	18	64.8	40	18.9	.....	4.78	.....	.....	.....	12	N E
Newbern.....	77.2	99	2	87.0	54	9	67.4	45	19.6	.....	5.88	.....	.....	.....	8	.....
Oak Ridge.....	74.7	99	4	87.1	50	18	62.3	49	24.8	.....	3.83	18	12	0	11	W
Pittsboro.....	73.0	97	2	84.3	47	18	61.7	50	22.6	.....	7.00	8	14	8	8	S W
Raleigh.....	78.1	97	3	85.4	62	18	72.2	35	13.2	.....	3.15	18	9	3	7	S W
Rockingham.....	77.7	101	1	90.0	52	18	65.4	49	24.6	.....	4.18	13	11	6	11	.....
Roxboro.....	74.8	98	3	86.8	48	18	62.9	50	23.9	.....	3.73	15	9	6	10	.....
Soapstone Mount.....	73.5	98	3	87.6	47	8	59.4	51	28.2	.....	3.54	8	12	10	10	S W
Saxon.....	74.3	102	4	89.5	45	17	59.1	57	30.4	.....	3.28	6	23	1	11	N E
Southern Pines.....	77.6	101	2	88.2	53	18	67.1	48	21.1	73.4	4.79	18	6	6	13	W
Salisbury.....	78.5	97	2	87.1	59	18	69.8	38	17.3	.....	1.86	.....	.....	.....	9	.....
Selma.....	77.1	100	3	88.3	49	18	65.9	51	22.4	.....	2.76	.....	.....	.....	6	.....
Willeyton.....	74.9	99	3	85.8	50	18	64.0	49	21.8	.....	1.83	16	7	7	6	S
Weldon.....	76.6	99	3	88.1	50	18	65.2	49	22.9	.....	3.72	13	11	6	11	S W
Wilmington.....	77.5	100	1	86.1	54	18	68.7	46	17.4	77.6	2.97	16	5	9	10	S

**State Meteorological Summary for June, 1895.**

Mean barometer 30.06 inches; normal for June 30.02. Highest barometer 30.36 on the 17th at Raleigh. Lowest barometer 29.83 on the 13th at Kitty Hawk. Mean temperature 74.5 degrees; normal for June, 74.4. Highest temperature 102 on the 3rd at Littleton, on the 4th at Saxon. Lowest temperature 37 on the 18th at Linville. Average rainfall 3.53 inches; normal for June 4.34 inches. Greatest monthly rainfall 7.00 inches at Pittsboro; least monthly rainfall 0.94 inches at Blowing Rock. Average number of clear days 14; partly cloudy 11; cloudy 5; rainy 10. Prevailing wind direction South-west. Average velocity 7.2 miles per hour. Normal direction for June, South-west; normal velocity 7.0 miles per hour.



# BULLETIN

OF THE

# NORTH CAROLINA BOARD OF HEALTH.

*Published Monthly at the Office of the Secretary of the Board, at Raleigh, N. C.*

**SUBSCRIPTION, 25 CENTS A YEAR.**

GEO. G. THOMAS, M. D., <i>Pres.</i> .....Wilmington.	W. P. BEALL, M. D.,.....Greensboro.
S. WESTRAY BATTLE, M. D.,.....Asheville.	W. J. LUMSDEN, M. D.,.....Elizabeth City.
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RICHARD H. LEWIS, M. D., <i>Secretary and Treasurer</i> , Raleigh.	

VOL. X.

SEPTEMBER, 1895.

No. 6.

### County Superintendents.

The regular biennial meetings of the county boards of health for the election of county superintendents under the Act of 1893 occurred on the first Monday of the present month. Although we took the precaution in our notice of the meetings to call special attention to the fact that according to the decision of the Attorney General a majority of all those eligible to membership was necessary to constitute a legal meeting, and urged upon the physicians the importance of attending and keeping in their own hands the selection of their superintendent instead of letting it go by default to the county commissioners, it happened in several instances that a quorum could not be obtained. We regret this greatly—as we regret anything that shows a lack of interest on the part of our medical men in sanitary matters.

As the result of the elections we have twenty-eight new superintendents. We trust they will all fully meet the grave

responsibilities laid upon them. We have been asked for a statement of the duties of a county superintendent. They are laid down so explicitly in the law, a copy of which we will send them together with other publications and blanks, that it would be superfluous to repeat them here. We feel, however, that it would not be amiss to impress upon them the vital importance of promptly carrying out the law in regard to quarantine and disinfection in contagious diseases, especially scarlet fever and diphtheria, under no circumstances permitting the omission of the posting of the placard. We mention this particularly because it has been done, on the ground that it might produce a panic, as if a panic, so far as the infected house is concerned, is not exactly what we desire to produce. In this connection the fear has come over us at times that in cases in influential families who objected, the attending physician might not always report them to the superintendent as promptly as the law requires (within 24 hours) and that possibly the

latter might not in such instances that come to his knowledge be invariably as firm as he ought to be. But the duty of both attending physician and superintendent of health is so plain and so urgent to any conscientious man that we shall dismiss the fear.

The relation between the outgoing superintendents and the secretary has always been so harmonious and agreeable that we see it severed with regret. We would request them to turn over promptly to their successors all blanks and placards they may have on hand together with such suggestions as their experience in the office justifies. And we would thank the new incumbents, after this is done, to notify us of any deficiencies in their outfit that we may immediately make them good.

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### Superintendent Ray.

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We print below, by request, a communication from certain citizens of Yancey county, which explains itself, and which speaks for itself. Having no personal knowledge of the facts of the case it will be understood of course that we can give no opinion in the matter. But we feel it to be due to Dr. Ray that we make a simple statement of what we do know. We know that he has, up to his last report in which he states that a new jailer had been appointed with marked improvement as the result, uniformly reported the sanitary condition of the jail as bad—varying somewhat in degree from time to time it is true, but never what it ought to be. Inasmuch as the County Superintendent is paid by the County Commissioners the presumption is that the former would hardly criticise the management of the latter without good grounds to support his assertions. We

confess to a feeling of admiration for the courage he has shown in doing his duty, as he saw it, regardless of consequences.

### COMMUNICATION.

BURNSVILLE, N. C., Aug. 10, 1895.

DR. R. H. LEWIS,

Sec. of State Board of Health,

Raleigh, N. C.:

SIR:— It has lately come to our knowledge through the Public Documents for the year 1895, that some severe criticism has been falsely and wrongfully heaped upon Dr. J. L. Ray, Superintendent of Public Health of Yancey county, N. C.

The report filed by the Board of Public Charities of Yancey county, N. C., and recorded in the Public Documents, is, it seems to us, a reflection upon Dr. Ray, and calculated to bring him into disrepute, and to make the matter plain, we have stated of our own knowledge the truth concerning the whole matter.

The jail was exceedingly filthy, and had been reported so for many months, and in the early part of the summer 1894, typhoid fever broke out from the jail, and twenty-four cases were developed in the town. Five cases originated in the jail, four of the jailer's family and help, and one prisoner. Also, five cases in family and among the help of G. L. Ray, within one hundred feet of the jail, also three cases in family of J. Hughes, within one hundred and fifty feet of the jail. Dr. Ray had frequently informed the Board of County Commissioners of the danger originating from the jail, and urged its cleansing. Also after the fever spoken of, had broken out, all manner of diligence was used to quit the spreading of the disease. Disinfectants required by law, were used. These

facts are within the knowledge of many men who signed the report now to be found in the Public Documents. Also that report has at least one forgery in it. It purports to have been signed by J. W. W. Burke, C. S. C. W. B. Banks was, at that time, and now is Clerk of said Court, and there is no such man as J. W. W. Burke in Yancey county. So this seems to be a wicked piece of mischief intended for Dr. Ray. Dr. Ray is a full graduate of the College of Physicians and Surgeons of Baltimore, Md., and holds license from State Board of Examiners since 1887. This report was not known to the citizens of the town until the Public Documents came out, or this wicked mess would have been corrected sooner. We will say in justice to the men who signed the report spoken of, that it might have been simply ignorance, and not willful meanness that prompted them. We feel it a duty devolving upon us to correct this statement made in the Public Documents, and do not feel that it would be doing justice to Dr. Ray to allow quietly this slander intended, or at least calculated for him.

Very respectfully,

G. D. RAY,  
 E. F. WATSON, Att'y at Law,  
 C. W. RAY,  
 J. E. EVANS, Merchant,  
 JOHN L. WILLIAMS, Mayor of  
 Burnsville,  
 SOL. EVANS,  
 J. P. HORTON, P. M., Burnsville,  
 N. C.,  
 JAY BIS RAY, Alderman,  
 W. A. ELLIOTT, Druggist,  
 J. A. ABERNATHY, Merchant,  
 D. R. CASIDA, Marshal, Burnsville,  
 T. F. ROLAND, Ex-Sheriff of Yancey  
 County, N. C.,  
 McINTURFF & ROLAND, Merchants,

BURNSVILLE DRUG CO.,  
 L. E. WILSON,  
 N. B. RAY, M. D.,  
 J. D. HUGHS,  
 C. E. ROBINSON, Ex-Reg. of Deeds,  
 Yancey County,  
 J. W. HIGGINS, Representative of  
 Yancey County,  
 S. D. DELLINGER,  
 CHAS. WILSON,  
 H. K. BOONE,  
 W. M. AUSTIN, M. D.,  
 L. A. BUTNER,  
 J. C. BYRD,  
 E. WILLIAMS,  
 J. A. HIGGINS,  
 J. A. RAY,  
 O. M. LEWIS, M. D.,  
 S. M. BENNETT, J. P.,  
 W. A. ROBERTSON, former Repre-  
 sentative of Yancey County.

NORTH CAROLINA, }  
 YANCEY COUNTY. }

I, W. B. Banks, Clerk of the Superior Court for Yancey County, N. C., do hereby certify that the foregoing list of names on the original copy of this statement appears to be in the handwriting of each individual thereto attached, and I know of my own knowledge that the persons who signed the same are active citizens of Burnsville and surrounding country, and the facts stated in this document are true. Given under my hand and official seal this 21st day of August, 1895.

W. B. BANKS, C. S. C.

Summary of Reports from County Superintendents of Health, for August, 1895 (eighty-three counties reporting).

The results of the elections for Superintendents by the County Boards of Health, on September 2nd, are given when known.

In the blanks on which these reports

are made the following items are called for:

1. The number of cases of small-pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.

2. The diseases which have been prevalent in the county and in what parts.

3. Epidemics among domestic animals.

4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. Several cases of typhoid fever.

ALEXANDER—Dr. R. B. Killian, Taylorsville. Very little sickness.

ALLEGHANY—Dr. C. G. Fowlkes, Topia. Five cases of measles, seven of whooping cough, one of scarlatina and two of typhoid fever. The repairing on the court house is now completed.

ANSON—Dr. E. S. Ashe, Wadesboro. No report.

ASHE—Dr. L. C. Gentry, Jefferson. One case of diphtheria. Seven mild cases of typhoid fever in the northeastern part. Some cholera infantum. A slight epidemic of hog cholera. Dr. Gentry was re-elected by the County Board of Health.

BEAUFORT—Dr. John C. Rodman,

Washington. Two cases of typhoid fever. Malarial diseases. Portions of the county need drainage badly. Dr. Joshua Tayloe, of Washington, is the new superintendent.

BERTIE—Dr. H. V. Dunstan, Windsor. Malarial diseases in all parts. An epidemic of hog cholera.

BLADEN—Dr. Newton Robinson, Elizabethtown. Malarial fever of mild form.

BRUNSWICK—Dr. D. I. Watson, Southport. Very little sickness. In the absence of a quorum of the County Board of Health Dr. Watson was re-elected by the County Commissioners.

BUNCOMBE—Dr. H. L. Baird, Asheville. Four cases of scarlatina. Instructions carried out. No deaths. Typhoid fever, dystenery and simple fever to a slight extent in all parts. At a largely attended meeting of the County Board Dr. E. C. Starnes, of Asheville, was elected Superintendent of Health.

BURKE—Dr. J. L. Laxton, Morganton. Three cases of whooping cough and eight of typhoid fever, in various parts. Dr. Laxton was re-elected.

CABARRUS—Dr. Leona M. Archey, Concord. Three cases of typhoid fever and one of pernicious malarial fever. Other malarial troubles in nearly all parts. Dr. Robert S. Young, of Concord, was elected Superintendent of Health.

CALDWELL—Dr. A. A. Kent, Lenoir. Ten cases of typhoid fever of mild type in different parts. The jail is overfilled with prisoners till the approaching term of Court. Every registered physician except one was at the meeting of the County Board. Dr. Kent was re-elected Superintendent of Health.

CAMDEN—No news has been received.



CARTERET—Dr. Geo. N. Ennett, Beaufort. Malarial and bowel troubles in all parts. One case of hemorrhagic malarial fever.

CASWELL—Dr. W. O. Spencer, Yanceyville. No report.

CATAWBA—Dr. J. M. McCorkle, Newton. No diseases to report. The County Board of Health failing to have a quorum present, the County Commissioners elected Dr. McCorkle to succeed himself.

CHATHAM—Dr. L. A. Hanks, Pittsboro. Three cases of typhoid fever. Malarial fever in several parts.

CHEROKEE—Dr. J. F. Abernathy, Murphy. A few cases of billious fever. Some cholera among hogs.

CHOWAN—Dr. R. H. Winborne, Rockhock. A few cases of typhoid fever. Intermittent and remittent fevers, cholera morbus, diarrhoea and dysentery. An epidemic of cholera in hogs and chickens. The sanitary condition of the county would be improved by systematic drainage of the large swamps running through the county. Dr. Winborne was re-elected by a full meeting of the County Board of Health.

CLAY—Dr. W. E. Sanderson, Hayesville. Two cases of typhoid fever. Dr. Sanderson will continue as Superintendent of Health.

CLEVELAND—Dr. O. P. Gardner, Shelby. Whooping cough and typhoid fever, 16 cases in the central part. Sanitary condition of towns not good.

COLUMBUS—Dr. I. Jackson, Whiteville. Three cases of typhoid fever. Malarial fever to a limited extent. Hog cholera in some parts.

Craven—Dr. Leinster Duffy, Newbern. No report. At the meeting of the County Board of Health Dr. J. W.

Duguid, of Newbern, was elected Superintendent.

CUMBERLAND—Dr. J. H. Marsh, Fayetteville. A few cases of whooping cough and of typhoid fever.

CURRITUCK—No news.

DARE—Dr. W. H. Peterson, Manteo. One case of diphtheria and one of typhoid fever. Malarial fever. Some hog cholera. Dr. W. B. Fearing, of Manteo, was elected Superintendent of Health by the County Commissioners.

DAVIDSON—Dr. R. L. Payne, Lexington. Mumps and whooping cough in scattered parts.

DAVIE—Dr. James McGuire, Mocksville. Very little sickness and no contagious diseases.

DUPLIN—Dr. W. P. Kennedy, Warsaw. Eight cases of typhoid fever. Malarial fever in most parts. At the meeting of the County Board Dr. James C. Grady, of Magnolia, was elected Superintendent.

DURHAM—Dr. J. M. Manning, Durham. One case of diphtheria. Typhomalarial and typhoid fevers in some parts, especially at the Pearl Cotton Mill—28 cases of typhoid reported for the whole county.

EDGECOMBE—Dr. Donald Williams, Tarboro. Fifteen cases of whooping cough, four of typhoid fever and one of hemorrhagic malarial fever. Less intermittent fever than before. Dr. Williams was re-elected Superintendent.

FORSYTH—Dr. D. N. Dalton, Winston. A few cases of typhoid fever. Remittent fever in nearly all parts.

FRANKLIN—Dr. E. S. Foster, Louisburg. Typhoid fever of mild type in some parts. Very little sickness.

GASTON—Dr. J. H. Jenkins, Dallas. Several cases of typhoid fever. Some

malarial fever. Tonsillitis quite common. One case of dysentery.

GATES—Dr. I. W. Costen, Gatesville. No diseases reported.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. One case of typhoid fever. Malarial fever in northern part. Several rooms at the county home need renovating. They will soon be limed. Dr. Baskerville was re-elected Superintendent.

GREENE—Dr. E. H. Sugg, Snow Hill. Three cases of whooping cough and several of mumps. Malarial fever. In the absence of a quorum at the meeting of the County Board of Health the County Commissioners elected Dr. Joseph E. Grimsley, of Snow Hill, Superintendent.

GUILFORD—Dr. A. R. Wilson, Greensboro. Two cases of typhoid fever. Dr. W. J. Richardson, of Greensboro, was elected Superintendent of Health.

HALIFAX—Dr. I. E. Green, Weldon. Malarial diseases to a limited extent.

HARNETT—Dr. J. F. McKay, Dickin-son. No report.

HAYWOOD—Dr. J. Howell Way, Waynesville. Two cases of typhoid fever. Enteric disorders very prevalent in all sections but less fever than usual at this season. An epidemic of hog cholera. The interest of our people in sanitation is growing. The special papers issued by the State Board of Health have been read with interest by many of our best citizens. The recent meeting of the County Board of Health was the most largely attended of any in its history. Dr. Way was re-elected Superintendent.

HENDERSON—Dr. J. L. Egerton, Hendersonville. Two cases of typhoid fever. Eutero-colitis has prevailed considerably among children.

HERTFORD—Dr. John W. Tayloe, Union. Four cases of typhoid fever. Intermittent and remittent fevers. Some hog cholera. Dr. Tayloe was re-elected Superintendent of Health.

HYDE—No news.

IREDELL—Dr. W. J. Hill, Statesville. Several cases of whooping cough and ten of typhoid fever. Malarial diseases in the lower part of county. The Kistler dam on Third creek has been torn away and the swamps above will be drained. The buildings at the county home need some repairs.

JACKSON—Dr. W. F. Tompkins, Webster. Three cases of typhoid fever. Dr. Tompkins was re-elected Superintendent of Health.

JOHNSTON—Dr. R. J. Noble, Selma. No diseases reported. Dr. L. L. Sasser, of Smithfield, was elected Superintendent of Health.

JONES—Dr. R. A. Whitaker, Trenton. Two cases of scarlatina and two of typhoid fever. Influenza around Trenton. A few cases of intermittent fever. The county home has been abolished and the inmates let out to the lowest bidder. The jail is in good condition except that bedding is badly needed.

LENOIR—Dr. C. B. Woodley, Kinston. Intermittent fever in nearly all parts of the county.

LINCOLN—Dr. W. L. Crouse, Lincoln- ton. No report. Dr. Thos. F. Costner, of Lincoln ton, was elected Superintendent of Health.

MCDOWELL—Dr. B. A. Cheek, Marion. Typhoid fever and whooping cough in different parts. Cholera in chickens. Dr. Geo. I. White, of Marion, was elected Superintendent of Health.

MACON—Dr. S. H. Lyle, Franklin.

Three cases of diphtheria and two of typhoid fever. Diarrhœa in all parts.

MADISON—Dr. Jas. K. Hardwicke, Marshall. Ten cases of typhoid fever. Dr. Hardwicke was re-elected by the County Commissioners.

MARTIN—Dr. W. H. Harrell, Williamston. Two cases of typhoid fever. Health of county unusually good for August.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. Two cases of scarlatina, two of diphtheria and ten of typhoid fever. Malarial fever on the outskirts of the city. The unsanitary condition of Irwin's creek on the west of Charlotte has been greatly improved by ditching or canalling. The sanitary condition of the convict camp on the Yorkville road is in excellent condition; the one on Lawyer's road only fair.

MITCHELL—Dr. C. E. Smith, Bakersville. Some typhoid fever in all parts.

MONTGOMERY—Dr. W. A. Simmons, Troy. One case of typhoid and some of continued fever. Some diarrhœa when people eat too much watermelon mixed with sweet cider.

MOORE—Dr. Gilbert McLeod, Carthage. Three cases of whooping cough and one of typhoid fever. Some hog cholera. Very little sickness. The jail is not sufficiently ventilated.

NASH—Dr. J. J. Mann, Nashville. Very little sickness.

NEW HANOVER—Dr. R. D. Jewett, Wilmington. Seven cases of scarlatina, three of typhoid fever and four of pernicious malarial fever. Malarial diseases. The sanitary condition of the public buildings is undergoing improvement. The County Board of Health elected Dr. J. C. Shepherd, of Wilmington, Superintendent, and the above report was made by him.

NORTHAMPTON—Dr. H. W. Lewis, Jackson. One case of hemorrhagic malarial fever. Other malarial diseases in all parts. Sanitary condition bad in some sections. The condition of the county home has been improved.

ONSLOW—Dr. E. L. Cox, Jacksonville. One case of hemorrhagic malarial fever. Hog cholera was prevalent. Dr. Cox was re-elected.

ORANGE—Dr. C. D. Jones, Hillsboro. Several cases of malarial fever and some dysentery. Dr. D. C. Parris was elected Superintendent of Health by the County Board.

PAMLICO—No news.

PASQUOTANK—Dr. W. W. Griggs, Elizabeth City. Three cases of scarlatina and four of typhoid fever. Dysentery, diarrhœa and malarial fevers in certain parts. An epidemic of hog cholera. Dr. J. E. Wood, of Elizabeth City, was elected Superintendent of Health by the County Commissioners.

PENDER—Dr. Geo. F. Lucas, Currie. Two cases of typhoid fever. Malarial fevers of mild form in the eastern part. An epidemic of hog cholera. Dr. Lucas was re-elected.

PERQUIMANS—Dr. John F. Speight, Hertford. Six cases of typhoid fever. Intermittent and remittent fevers. Dr. Speight was re-elected.

PERSON—Dr. C. G. Nichols, Roxboro. No diseases to report.

PITT—Dr. W. H. Bagwell, Greenville. Three cases of scarlatina, one of diphtheria, two of typhoid fever and one of hemorrhagic malarial fever. Whooping cough in some sections. Some hog cholera. Dr. Frank W. Brown, of Greenville, was elected Superintendent by the County Board of Health.

POLK—Dr. Earl Grady, Tryon. No diseases to report. The jail is kept

clean but needs repairing dreadfully. I have tried but can get nothing done and have resigned my position. At the meeting of the County Board Dr. C. J. Kenworthy, of Tryon, was elected Superintendent.

RANDOLPH—Dr. J. M. Boyette, Asheboro. Very little sickness. A few cases of dysentery and bronchial troubles. Dr. T. T. Ferree, of Asheboro, was elected Superintendent by the County Board of Health.

RICHMOND—Dr. J. M. Covington, Rockingham. Five cases of typhoid and many of malarial fever of mild type. Whooping cough in some parts. Dr. W. H. Steele, of Rockingham, was elected Superintendent by the County Board of Health.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. One case of diphtheria—all precautions taken. An epidemic of hog cholera. The sanitary condition of the jail has been improved by the erection of a new tank for flushing the sewers.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. Two cases of whooping cough and eight of typhoid fever. Typho-malarial fever in Reidsville. Dr. Courts was re-elected.

ROWAN—Dr. John Whitehead, Salisbury. Twelve cases of whooping cough, two of scarlatina and two of typhoid fever. Malarial fever in various parts.

RUTHERFORD—Dr. W. A. Thompson, Rutherfordton. Four cases of typhoid fever. In the absence of a quorum at the meeting of the County Board of Health the County Commissioners elected Dr. E. B. Harris, of Rutherfordton, Superintendent.

SAMPSON—Dr. Jno. A. Stevens, Clinton. Whooping cough very prevalent. A few cases of influenza, many of diar-

rhœa and dysentery. Some malarial fever. Hog cholera. In the absence of a quorum of the County Board of Health the County Commissioners re-elected Dr. Stevens.

STANLY—Dr. D. P. Whitley, Millingport. Five cases of typhoid fever. Diarrhœa and dysentery in all parts. Dr. J. N. Anderson, of Albemarle, was elected Superintendent by the County Board of Health.

STOKES—Dr. W. L. McCanless, Danbury. One case of typhoid fever.

SURRY—Dr. J. B. Hollingsworth, Mt. Airy. No report.

SWAIN—Dr. R. L. Davis, Bryson City. Two cases of typhoid fever. Cholera in Hogs. Dr. A. M. Bennett, Charleston, was elected Superintendent of Health.

TRANSYLVANIA—Dr. C. W. Hunt, Brevard. No report.

TYRRELL—Dr. Ab. Alexander, Columbia. A mild type of typhoid fever in all parts.

UNION—Dr. J. E. Ashcraft, Monroe. Eight or ten cases of measles, six of scarlatina and eight of typhoid fever.

VANCE—Dr. W. T. Cheatham, Henderson. A large number of cases of whooping cough. Fourteen of typhoid fever in the northern part, clearly traceable to the drinking water. Dr. J. H. Tucker, of Henderson, was elected Superintendent by the County Board of Health.

WAKE—Dr. P. E. Hines, Raleigh. Two cases of whooping cough. Eighteen cases of typhoid in different parts, city and county. Diarrhœa and malarial fever.

WARREN—Dr. P. J. Macon, Warrenton. No report.

WASHINGTON—No news.

WATAUGA—Dr. W. B. Councill, Boone. Two cases of scarlatina of mild form.

WAYNE—Dr. W. J. Jones, Jr., Goldsboro. Four cases of whooping cough, ten of scarlatina and six of typhoid fever. Malarial troubles in all parts. An epidemic of hog cholera. Dr. Jones was re-elected Superintendent by the County Board of Health.

WILKES—Dr. J. W. White, Wilkesboro. Typhoid fever in some parts. Dr. J. M. Turner, of Wilkesboro, was elected Superintendent of Health.

WILSON—Dr. Albert Anderson, Wilson. Two cases of whooping cough, one of diphtheria and two of pernicious malarial fever. Malarial fever in all parts. Dr. Nathan Anderson, of Wilson, was elected Superintendent by the County Board of Health.

YADKIN—Dr. T. R. Harding, Yadkinville. Typhoid fever of severe type in nearly all parts. Dr. Harding was re-elected by the County Board of Health.

YANCEY—Dr. J. L. Ray, Burnsville. A few cases of whooping cough and two of typhoid fever. A little hog cholera. The jail is now about as clean as it well can be kept under the circumstances. The new jailer has cleaned things up very nicely.

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Review of Diseases Reported for August, 1895.

BOWEL DISEASES\*—From Carteret, Chowan, Haywood, Henderson, Macon, Montgomery, Pasquotank, Sampson, Stanly and Wake—10 counties.

CHOLERA INFANTUM—From Ashe.

CHOLERA MORBUS—From Chowan.

CHOLERA, IN CHICKENS — From Chowan and McDowell.

CHOLERA, IN HOGS — From Ashe, Bertie, Cherokee, Chowan, Columbus, Dare, Haywood, Hertford, Moore, Onslow, Pasquotank, Pender, Pitt, Robeson, Sampson, Swain, Wayne and Yancey—18 counties.

DIPHTHERIA—From Ashe (1), Dare (1), Durham (1), Macon (3), Mecklenburg (2), Pitt (1), Robeson (1) and Wilson (1)—8 counties.

DYSENTERY—From Chowan, Gaston, Orange, Pasquotank, Randolph, Sampson and Stanly—7 counties.

INFLUENZA—From Jones and Sampson.

MALARIAL FEVER—From Beaufort, Bertie, Bladen, Cabarrus, Carteret, Chatham, Cherokee, Chowan, Columbus, Dare, Duplin, Durham, Edgecombe, Forsyth, Gaston, Granville, Greene, Halifax, Hertford, Iredell, Jones, Lenoir, Mecklenburg, New Hanover, Northampton, Onslow, Orange, Pasquotank, Pender, Perquimans, Pitt, Richmond, Rowan, Sampson, Wake, Wayne and Wilson—37 counties.

MALARIAL FEVER, HEMORRHAGIC —From Cartaret (1), Edgecombe (1), Northampton (1), Onslow (1) and Pitt (1).

MALARIAL FEVER, PERNICIOUS —From Cabarrus (1), New Hanover (4) and Wilson (2).

MEASLES—From Alleghany and Union.

MUMPS—From Davidson and Greene.

SCARLATINA—From Alleghany (1), Buncombe (4), Jones (2), Mecklenburg (2), New Hanover (7), Pasquotank (3), Pitt (3), Rowan (2), Union (6), Watauga (2) and Wayne (10)—11 counties.

**TYPHOID FEVER**—From Alamance, Alleghany, Ashe, Beaufort, Buncombe, Burke, Cabarrus, Caldwell, Chatham, Chowan, Clay, Cleveland, Columbus, Cumberland, Duplin, Durham, Edgecombe, Forsyth, Franklin, Gaston, Granville, Guilford, Haywood, Henderson, Hertford, Iredell, Jackson, Jones, McDowell, Macon, Madison, Martin, Mecklenburg, Mitchell, Montgomery, Moore, New Hanover, Pasquotank, Pender, Perquimans, Pitt, Richmond, Rockingham, Rowan, Rutherford, Stanly, Stokes, Swain, Tyrrell, Union, Vance, Wake, Wayne, Wilkes, Yadkin and Yancey—56 counties.

**WHOOPING COUGH**—From Alleghany, Burke, Cleveland, Cumberland, Edgecombe, Greene, Iredell, McDowell, Moore, Pitt, Rockingham, Rowan,

Sampson, Vance, Wake, Wayne, Wil-  
son and Yancey—18 counties.

\*Cholera-Morbus, Cholera-Infantum and Dysentery when mentioned by reporters are given separate headings.

**Summary of Mortuary Reports for August, 1895.**

	White.	Col'd.	Total.
Aggregate population.....	88,202	62,723	150,925
Aggregate deaths.....	108	103	211
Representing annual death rate per 1000.....	14.7	19.7	16.7
<i>Causes of Death.</i>			
Typhoid fever.....	15	6	21
Malarial fever.....	0	7	7
Whooping Cough.....	1	1	2
Pneumonia.....	2	5	7
Consumption.....	12	15	27
Brain diseases.....	7	2	9
Heart diseases.....	12	8	20
Diarrheal diseases.....	24	19	43
All other diseases.....	35	37	72
Accident.....	0	3	3
	108	103	211
Deaths under 5 years.....	29	39	68
Still-born.....	8	9	17

Condition of Jails and County Homes by Counties for August, 1895.

COUNTIES	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each (in cubic feet.)	Number giving evidence of successful vaccination.		General Sanitary Condition.	Number inmates	Space allotted each. (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance...	good	20 (a)				good	8			
Alexander	very good					very good	8			
Alleghany...	no change	0				good	4	*		
Anson										
Ashe.....	good	8	400	1	1	good	9	600		1
Beaufort	fair	15				good	13			
Bertie.....	very good	12 (b)			1	very good	19		1	3
Bladen	no change	2				no change	8			
Brunswick	no change						8			
Buncombe	good	88 (c)	1,050 (d)	24	49	good	32	385-880	17	9
Burke.....	no change	13				good	14			
Cabarrus...	good	31 (e)	*	4	13	good	26	*	13	12
Caldwell...		10	+	0	8		2	*	0	1
Camden										
Carteret		0					0			
Caswell										
Catawba...	good	10		3	4	good	36		9	12
Chatham...	very good	15 (f)	*	3	7	very good	28	*	10	10
Cherokee...	good					good				
Chowan	fair	3	*	0	0	fair	6	*	2	0
Clay.....	good	2								
Cleveland...	good	16	1,000	0	12	good	22	900	0	4
Columbus...	good	7	*		6	good	14	*		2
Craven										
Cumberland	good	12				good	17			
Currituck										
Dare.....		0				fair	2	*	0	0
Davidson...	good	8	*	0	0	good	25	725	0	2
Davie.....	§	8	§	1	2	good	6		1	0
Duplin.....		0				fair	14	1,000	3	3
Durham		45 (g)	860 (h)				24	1,000		
Edgecombe	fair	9	*	1	2		23	*	2	1
Forsyth.....	good	23	1,000	6	4	good	28	*	8	6

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. § Too crowded. (a) Includes 14 in House of Correction. (b) Includes 4 in House of Correction. (c) Includes 69 in House of Correction. (d) For House of Correction 200 to 300. (e) Includes 29 in House of Correction. (f) Includes 7 in House of Correction. (g) Includes 25 in House of Correction. (h) For House of Correction 400.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin .....	very good	3	.....	.....	.....	very good	25	.....	.....	.....
Gaston .....	well kept	.....	.....	.....	.....	well kept	.....	.....	.....	.....
Gates .....	.....	.....	.....	.....	.....	.....	8	.....	.....	.....
Graham .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Granville.....	good	3	600	0	0	good	27	600	4	6
Greene .....	.....	0	.....	.....	.....	.....	8	1,000	.....	1
Guilford .....	.....	26 (a)	572 †	.....	.....	.....	31	*	.....	.....
Halifax.....	good	8	1,000	3	4	good	43	700	5	4
Harnett .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haywood .....	.....	11	.....	0	10	.....	6	.....	0	.....
Henderson .....	.....	7	.....	.....	.....	.....	5	.....	.....	.....
Hertford .....	.....	1	*	0	0	.....	7	*	0	2
Hyde .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iredell .....	no change	37 (b)	500	.....	.....	+	22	500	.....	.....
Jackson .....	good	3	.....	0	2	good	3	.....	.....	.....
Johnston .....	.....	7	.....	.....	.....	.....	13	.....	.....	.....
Jones .....	+	5	*	3	4	.....	0	.....	.....	.....
Lenoir .....	.....	6	*	0	3	.....	0	.....	.....	.....
Lincoln .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
McDowell .....	.....	0	.....	.....	.....	good	15	.....	0	1
Macon .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Madison.....	good	10	400	4	6	good	15	500	7	9
Martin.....	good	13	1,000	1	6	good	14	*	5	3
Mecklenburg ..	excellent	13 (c)	.....	.....	.....	excellent	69	.....	.....	.....
Mitchell .....	good	14	.....	.....	.....	good	8	.....	.....	.....
Montgomery....	good	4	500	.....	.....	good	15	500	.....	.....
Moore .....	+	3	*	.....	.....	good	7	*	.....	.....
Nash.....	good	6	600	4	6	good	38	1,000	5	7
New Hanover ..	.....	52 (d)	300 (e)	24	17	good	12	800	8	4
Northampton ..	good	33	1,000	13	10	excellent	4	850	0	1
Onslow .....	good	8	.....	.....	.....	good	3	.....	.....	.....
Orange .....	no change	2	.....	.....	.....	no change	17	.....	.....	.....
Pamlico .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents. (a) Includes 7 in House of Correction. (b) Includes 29 in House of Correction. (c) Includes 98 in House of Correction. (d) Includes 10 in House of Correction. (e) For House of Correction 200.



## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....	good	3	*			good	28	*		
Pender.....	fair	3		0	2	fair	4		0	0
Perquimans.....		1					6			
Person.....	very bad	1	1,000		1	good	13	800		
Pitt.....	good	11				good	25			
Polk.....	clean +	10	*	2	4					
Randolph.....	good	1				good	34			
Richmond.....	good	18		2	5	good	21		4	6
Robeson.....	better	23 (a)								
Rockingham.....	good	4	*			good	39	420-700	18	
Rowan.....		9	500	3	4		22	500+	10	10
Rutherford.....	fair	22	800			fair	18	800		
Sampson.....	very good	5				very good	16			
Stanly.....	good	9				good	8	*	0	1
Stokes.....	good	10	500	3	5	good	12	600	4	4
Surry.....										
Swain.....	good	12				good	4			
Transylvania.....										
Tyrrell.....	good	1	*			good	1	*		1
Union.....	good	16				good	21			
Vance.....	excellent	9	*	3	4	excellent	11	*	2	2
Wake.....	good	83 (b)				very good	62			
Warren.....										
Washington.....										
Watauga.....	first rate	4				first rate	7			
Wayne.....	good	18			1	good	12			1
Wilkes.....	good	22				good	14			
Wilson.....	good	3	*	0	1	good	28	*	6	8
Yadkin.....	fair	6		0	2	good	21		0	7
Yancey.....	fair +	9	450	0	8	fair	6			

\* Space exceeds 1,000 cubic feet. + See Summary of Reports from County Superintendents.  
 (a) Includes 8 in House of Correction. (b) Includes 65 in House of Correction.

Mortuary Report for August, 1895.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrhoeal Diseases.	All Other Diseases.	Accident. Suicide.	Violence.	TOTAL			
		By Races.		By Races.																	By Races.	By Towns.	Deaths under 5 years.	Still Born.
		White.	Colored.	White.	Colored.																			
Asheville..... Dr. H. L. Baird.	White. Colored.	8,000 4,000	12,000	15.0 12.0	14.0	1															10 4	14	1	...
Charlotte..... Dr. H. M. Wilder.	White. Colored.	11,785 7,855	19,641	16.3 24.3	19.5	1															16 16	32	6	7
Durham..... Dr. J. M. Manning.	White. Colored.	4,500 3,500	8,000	13.3 3.4	9.0									1	1						5 6	11	2	1
Fayetteville..... Dr. J. H. Marsh.	White. Colored.	2,800 3,200	5,000	17.2 27.3	21.6								1								4 9	13	2	1
Goldsboro..... T. H. Bain, Esq.	White. Colored.	3,500 1,800	5,300	13.7 53.3	27.2	1		1		1											4 12	16	2	1
Greensboro..... Dr. A. R. Wilson.	White. Colored.	5,500 2,500	8,000	4.5 33.6	13.5	1						4		1							12 9	21	2	...
Henderson..... Dr. W. J. Judd.	White. Colored.	2,250 2,000	4,250	21.3 12.0	16.9	1			1												4 6	10	1	*
Hillsboro..... Dr. C. D. Jones.	White. Colored.	400 300	700	0.0 40.0	17.1																0 1	1	0	...
Lenoir..... Dr. A. A. Kent.	White. Colored.	800 300	1,100	0.0 0.0	0.0																0 0	0	0	...
Lexington..... Dr. R. L. Payne.	White. Colored.	1,800 300	2,100	0.0 0.0	0.0																0 0	0	0	...
Marion..... Dr. B. A. Cneek.	White. Colored.	650 150	800	36.9 0.0	30.0									1							2 2	4	1	1
Monroe..... Dr. J. M. Blair.	White. Colored.	1,800 600	2,400	6.7 49.0	15.0																1 2	3	3	...
Oxford..... Dr. W. O. Baskerville.	White. Colored.	1,600 1,400	3,000	22.5 25.7	24.0								1								3 3	6	1	...
Pittsboro..... Dr. L. A. Hanks.	White. Colored.	350 250	600	0.0 0.0	0.0																0 0	0	0	...
Raleigh..... Dr. Jas. McKee.	White. Colored.	8,500 7,500	16,000	28.2 25.6	27.0	6						1	1	2	3	4	3				10 16	36	8	1
Rockingham..... Dr. J. M. Covington.	White. Colored.	1,300 400	1,750	0.0 0.0	0.0																0 0	0	0	...
Rocky Mount..... Dr. G. L. Wimberley.	White. Colored.	1,200 400	1,600	0.0 0.0	0.0																0 0	0	0	...
Salem..... F. E. Keehlu, Esq.	White. Colored.	3,912 342	4,254	6.1 6.0	5.6								1								2 2	4	2	...
Salisbury..... Dr. John Whitehead.	White. Colored.	3,000 2,000	5,000	24.0 24.0	24.0								1		1	2	3				6 10	16	4	...
Scotland Neck..... Mayor J. A. Perry.	White. Colored.	775 425	1,200	30.9 28.2	30.0									1	1						2 1	3	1	1
Southport..... L. A. Galloway, Esq.	White. Colored.	750 450	1,200	16.0 26.7	20.0																1 1	2	2	1
Statesville..... Dr. W. J. Hill.	White. Colored.	2,500 1,000	3,500	4.8 0.0	3.4																1 1	2	1	...
Tarboro..... Dr. Donald Williams.	White. Colored.	1,300 1,200	2,500	27.7 30.0	28.8	2		1						1							3 3	6	1	...
Washington..... Dr. J. C. Rodman.	White. Colored.	3,000 2,500	5,500	12.0 0.0	6.5									1							3 6	9	3	...
Wilmington..... Dr. J. C. Shepard.	White. Colored.	9,000 13,000	22,000	13.3 11.8	11.2	1						1	1	1							10 16	26	3	2
Wilson..... Dr. Albert Anderson.	White. Colored.	2,000 1,500	3,500	6.0 24.0	13.7	1															1 3	4	1	...
Winston..... Dr. John Bynum.	White. Colored.	5,200 4,800	10,000	18.5 25.0	15.6							4									8 10	18	1	...

**METEOROLOGICAL SUMMARY FOR NORTH CAROLINA, AUGUST, 1895.**  
 Furnished by the North Carolina Agricultural Experiment Station and State  
 Weather Service.

H. B. BATTLE, PH. D., DIRECTOR.

C. F. VON HERRMAN, METEOROLOGIST.

STATIONS.	TEMPERATURE, (DEGREES FAHR.)										NO. OF DAYS.					
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range.	Mean Rel. Humidity.	Total Precipitation.	Clear.	Partly Cloudy.	Cloudy.	Rainy.	Prevailing Wind.
Asheville .....	72.0	89	9	83.7	48	2	60.3	41	23.4	66.8	5.03	23	4	4	9	N
Bakersville .....	69.9	88	8	83.1	40	2	56.7	48	26.4	.....	5.57	.....	.....	.....	.....	.....
Blowing Rock .....	66.0	82	8	73.7	41	2	58.3	41	15.4	.....	5.88	.....	.....	.....	6	NW
Charlotte .....	77.5	94	5	86.6	59	2	68.4	35	18.2	.....	4.41	15	12	4	11	SW
Chapel Hill .....	78.1	98	11	88.8	55	2	67.4	43	21.3	.....	4.46	19	9	3	11	SW
Henderson .....	78.2	96	11	88.3	57	1	68.1	39	20.2	78.7	2.95	19	6	6	11	S
Littleton .....	77.6	97	11	88.9	55	1	66.4	42	22.5	.....	4.99	16	6	9	8	SW
Lenoir .....	73.6	88	24	80.9	56	2	68.5	32	12.4	.....	7.41	6	15	10	13	SW
Louisburg .....	77.4	96	11	87.2	55	2	67.6	41	19.6	.....	3.81	.....	.....	.....	6	.....
Mt. Airy .....	73.0	93	11	84.2	48	2	61.8	45	22.4	.....	5.27	4	22	5	8	SW
Mt. Pleasant .....	77.3	94	29	87.1	55	2	67.5	39	19.6	.....	4.97	5	11	15	10	SW
Mocksville .....	75.5	90	11	84.3	55	2	66.7	35	17.6	.....	3.67	.....	.....	.....	10	SW
Newbern .....	80.2	97	30	89.7	60	2	70.8	37	18.9	.....	4.54	.....	.....	.....	16	.....
Oak Ridge .....	75.6	97	10 11	87.1	52	1	64.0	45	23.0	.....	3.62	24	4	3	8	W
Pittsboro .....	74.8	92	10	81.6	53	1 3	64.9	39	19.7	.....	5.36	9	17	5	9	SW
Raleigh .....	77.4	94	10	86.2	60	3	68.5	34	17.7	80.0	3.99	13	11	7	16	SW
Rockingham .....	80.2	97	12 29	91.3	58	2	69.0	39	22.3	.....	6.37	16	12	3	9	W
Roxboro .....	77.6	97	11	89.7	53	1	65.5	44	24.2	.....	2.33	23	2	6	8	.....
Soapstone Mount .....	71.8	94	11	87.7	50	3	61.9	44	25.8	.....	5.54	5	18	8	9	SW
Saxon .....	76.8	97	11 12	90.2	48	1	63.5	49	26.7	.....	4.23	3	26	2	9	SW
Southern Pines .....	79.0	98	19	88.0	63	26	70.1	35	17.7	.....	5.99	19	7	5	10	S
Salisbury .....	78.9	93	11	86.7	59	2	71.2	34	15.5	.....	3.48	.....	.....	.....	13	.....
Selma .....	77.4	96	11	87.6	55	2	67.2	41	20.4	.....	6.26	.....	.....	.....	11	.....
Willenton .....	77.6	95	13	87.6	57	2 3	67.6	38	20.0	.....	3.66	9	14	8	4	S
Weldon .....	78.0	96	11	88.3	56	2	67.6	40	20.7	.....	4.07	14	13	4	10	S
Wilmington .....	79.0	94	19	86.7	65	3	71.2	29	15.5	83.9	6.52	14	9	8	15	S

**State Meteorological Summary for August, 1895.**

Mean barometer 30.02 inches; normal for August 30.03. Highest barometer 30.24 on the 23rd at Raleigh. Lowest barometer 29.78 on the 18th at Kitty Hawk. Mean temperature 76.3 degrees; normal for August, 75.8. Highest temperature 98 on the 11th at Chapel Hill. Lowest temperature 38 on the 2d at Linville. Average rainfall 5.50 inches; normal for August 6.09 inches. Greatest monthly rainfall 12.54 inches at Horse Cove; least monthly rainfall 2.33 inches at Roxboro. Average number of clear days 13; partly cloudy 12; cloudy 6; rainy 11. Prevailing wind direction South-west. Average velocity 6.0 miles per hour. Normal direction for August, South-west; normal velocity 6.6 miles per hour.



## BULLETIN

OF THE

## NORTH CAROLINA BOARD OF HEALTH.

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RICHARD H. LEWIS, M. D., <i>Secretary and Treasurer</i> , Raleigh.			

VOL. X.

OCTOBER, 1895.

No. 7.

**Health Conference.**

On the 6th of next month the State Board of Health proposes to hold a health conference with the people at Washington. The pronounced success of the one at Salisbury in September of last year, as shown not only by the interest evinced by the community in the meetings at the time, but also by the lasting impression made upon it, as we are informed by residents of the town, encourages us to hope for good results in the east. A number of papers are in sight.

We earnestly hope, as it is beyond the power of the Board to hold these meetings in every county, that the attendance will not be limited to citizens of Washington and Beaufort county, but that numbers from the contiguous counties will also participate. The papers will not be technical, but popular in character, and after a subject is introduced by the reading of one, members of the audience will be re-

quested to ask questions and the Board will answer them. We would thank our readers in the section alluded to to spread the above mentioned facts among their neighbors and induce them to attend by leading the way. Wednesday, November 6th.

**American Public Health Association.**

Want of space forbids an extended notice of the twenty-third annual meeting of the American Public Health Association at Denver, Oct. 14, but we desire to place on record our appreciation of the cordial reception and abounding hospitality shown us by the citizens of that beautiful and wide-awake city. Dr. Sewell, the chairman of the Committee of Arrangements, was untiring in his efforts to give pleasure. Among other entertainments arranged for us was a trip to Manitou, Pike's Peak, the Garden of the Gods, and Colorado Springs. The weather report at the signal station on top of

Pike's Peak, 14,147 feet above sea level, the morning we were there, Oct. 5th, was, snow fall 3 feet, temperature 22°, wind 40 miles an hour. The weather during our stay was, for the most part, beautiful, but one day we had, to quote our famous humorist of Buck Shoals, "Climate enough for a town twice the size." It is an interesting country in some aspects, but we must confess that we came home a hopeless "tenderfoot."

Owing to the great distance from the centres of population the attendance was not so large as usual, nor were the scientific proceedings, on that account, altogether as interesting. Dr. Liceaga, the leading sanitarian of Mexico, was elected president, after several tie ballots with Dr. Horlbeck, of Charleston, S. C. The next meeting will be in Buffalo, N. Y.

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### Responsibility of the Physicians in Contagious Diseases.

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While in attendance upon the recent meeting of the American Public Health Association at Denver, we were told by the secretary of one of the State Boards of Health, the incident mentioned below. It made a deep impression on us at the time, but since our return certain information which we have occasion to believe is trustworthy has come to us that leads us to fear that some of our own physicians may be making the same fatal mistake. This fear has deepened the impression referred to, and constrains us to place it before our readers. In view of the high character, intelligence and conscientiousness of the profession as a whole, it cannot be that such things happen often, but they are so pregnant with all that is associated with suffering and death—made a thousand times more

bitter by the needlessness of it—that a word of warning cannot come amiss. But to the story.

In a certain town, which shall be nameless, there live two families opposite one another on the same street. There are children in each, the mothers are intimate and dear friends, and a day does not pass that the families are not more or less together. Recently a child in one was taken sick. The attending physician diagnosed the case as scarlet fever, but, as it was a very mild case, said he did not think it worth while to make an alarm by mentioning it. The children of the family opposite, several in number, visited the little sick friend daily, no one dreaming of danger. They all took scarlet fever and one died. The first time the stricken mother met the physician of the first case she upbraided him with, "Doctor, you killed my child." He attempted to excuse himself, but to the mother-heart mourning in bitter agony over the needless sacrifice of her child that might have been so easily prevented, there could be no excuse. "Doctor," she repeated, "you killed my child. If you had told my friend that her child had scarlet fever, she would never have permitted my children to enter her house." What an awful accusation! How these words must ring in his ears, and what a pang, if he is not devoid of feeling, the sight or mention of that mother must always bring to his heart!

Now in this case the motive of the physician was doubtless in a certain sense a praiseworthy one—the indisposition to say or do anything disagreeable—but that fact cannot erase the dreadful consequence of his failure to do his plain duty. That the attack was a "mild" one, which was urged as an excuse, was, of course, no

excuse at all, for any physician who has learned the a b c of medicine knows that the disease can be contracted from a mild as well as from a severe form, and no man can predict what course the secondary case will pursue.

But the duty of the attending physician to sound a note of warning is not restricted to cases in which the diagnosis is plain. Whenever there is any doubt about the diagnosis, as, for instance, in a supposed case of roseola where scarlet fever is known to exist in the community, it is clearly his duty to insist upon the observance of every precaution at least until sufficient time has elapsed for desquamation or its absence to settle the matter. He has no right to take any chances when such serious consequences are involved—to stake the comfort and convenience of his patron against the possible loss of innocent lives. And when the diagnosis is practically certain, it does seem to us that a failure to promptly take steps—every available means—to prevent the spread of the disease would amount to criminal negligence. It may be considered a rather strong expression, but we hold ourself ready to defend the assertion that any physician who knows that he has a case of contagious disease of a kind liable to produce death and who neglects to have carried out to the very best of his ability every sanitary precaution to prevent its spread *gambles in human life*. How any man can assume the terrible responsibility of a failure to do this simply passes our comprehension.

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Summary of Reports from County Superintendents of Health, for Sept., 1895 (eighty-two counties reporting).

In the blanks on which these reports

are made the following items are called for:

1. The number of cases of small-pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.

2. The diseases which have been prevalent in the county and in what parts.

3. Epidemics among domestic animals.

4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. Typhoid fever in some parts.

ALEXANDER—Dr. T. F. Stevenson, Taylorsville. One case scarlatina and two of typhoid fever. Very little sickness.

ALLEGHANY—Dr. Robert Thompson, of Sparta, was elected Superintendent by the County Board of Health.

ANSON—Dr. E. S. Ashe, Wadesboro. No report.

ASHE—Dr. L. C. Gentry, Jefferson. Three cases of typhoid fever.

BEAUFORT—Dr. Joshua Tayloe, Washington. One case of diphtheria and one of hemorrhagic malarial fever. Malarial diseases in the county.

BERTIE—Dr. H. V. Dunstan, Windsor. One case of hemorrhagic malarial

fever. Malarial fever in all parts. Cholera in hogs and chickens. Less sickness this season than in twenty-five years. Owing to the crowded condition of the house of correction since the last term of the court I have advised a thorough whitewashing of the building.

BLADEN—Dr. Newton Robinson, Elizabethtown. Mild type of malarial fever in improperly drained portions. Some draining is being done. Better attention is paid to pure water. Driven wells are used now where necessary and they can be supplied. The court house is new and in very good condition. Dr. Robinson was re-elected superintendent.

BRUNSWICK—Dr. D. I. Watson, Southport. One case of typhoid fever. Malarial diseases in all parts. The county home has been reported by the grand jury as needing repairs, but nothing has been done to make it warmer or more comfortable. The jail is so arranged that it is impossible to keep it in good hygienic condition. There is an idiotic epileptic in it who does not receive proper attention, and should be removed to an asylum.

BUNCOMBE—Dr. E. C. Starnes, Asheville. A few cases of whooping-cough and typhoid fever, one mild case of scarlatina and one of diphtheria. The county convicts sleep in tents.

BURKE—Dr. J. L. Laxton, Morganton. Six cases of typhoid fever. Some cases of diarrhoea and gastric troubles, chiefly among children.

CABARRUS—Dr. Robert S. Young, Concord. Eight cases of typhoid fever. Malarial fever in all parts. Epidemic of chicken cholera.

CALDWELL—Dr. A. A. Kent, Lenoir. One case of scarlatina and 14 of typhoid fever.

CAMDEN—No Board of Health.

CARTERET—Dr. George N. Ennett, Beaufort. No diseases reported.

CASWELL—Dr. W. O. Spencer, Yanceyville. No diseases reported.

CATAWBA—Dr. J. M. McCorkle, Newton. No diseases reported. Sanitary condition of County is good except some malaria along one or two streams that are very low.

CHATHAM—Dr. L. A. Hanks, Pittsboro. Malarial fever in some parts. The arrangement for heating the jail is rather defective, but that will be remedied before cold weather.

CHEROKEE—Dr. J. F. Abernathy, Murphy. Six cases of Diphtheria, sporadic, one death.

CHOWAN—Dr. R. H. Winborne, Rockyhook. Intermittent and remittent fever in all parts but less than usual. Hog cholera still prevalent in some parts. Better drainage of swamps would improve our sanitary condition. Our farms are well cultivated and much lime is used on them. The County home has been reshingled.

CLAY—Dr. W. E. Sanderson, Hayesville. Three cases of typhoid fever. A few cases of billious fever. Cholera in hogs. A new jail is badly needed.

CLEVELAND—Dr. O. P. Gardner, Shelby. Fifteen cases of whooping-cough. Six cases of typhoid fever.

COLUMBUS—Dr. I. Jackson, Whiteville. Five cases of typhoid fever. Hog cholera, but not so destructive as formerly.

Craven—Dr. J. W. Duguid, New-Berne. Four cases of Scarlatina, one of diphtheria, three of typhoid fever, one of pernicious malarial fever. Intermittent and remittent fever in the county. The houses at the county



home have been renovated and ceiled and a well nearly 70 feet deep has recently been bored, giving good water. The jail has no sewerage and has bad drinking water. The county, with few exceptions that need drainage, is in good condition.

CUMBERLAND—Dr. J. Vance McGougan, of Fayetteville, was elected superintendent. Four cases of whooping-cough, two of typhoid fever, ten of pernicious malarial and six of hemorrhagic malarial fever, the latter confined to a small section east of the Cape Fear River.

CURRITUCK—No Board of Health.

DARE—Dr. W. B. Fearing, Manteo. One case of diphtheria. Very little sickness. The county home and jail are to be thoroughly renovated.

DAVIDSON—Dr. R. L. Payne, Lexington. No diseases reported.

DAVIE—Dr. James McGuire, Mocksville. Malarial fever in different parts. The jail is an old building, inconveniently arranged and hard to keep in proper sanitary condition.

DUPLIX—Dr. J. C. Grady, Magnolia. Malarial and typhoid fevers, measles and scarlatina. Hog cholera.

DURHAM—Dr. J. M. Manning, Durham. One case of whooping-cough. Intermittent and typho-malarial fevers in certain parts. A quorum of the county Board of Health failing to convene Dr. Manning was re-elected by the Board of County Commissioners.

EDGECOMBE—Dr. Donald Williams, Tarboro. Five cases of scarlatina and five of hemorrhagic malarial fevers. Whooping-cough in some parts. Quarantine regulations are enforced.

FORSYTH—Dr. D. N. Dalton, Winston. Several cases of typhoid fever. Remittent fever. A quorum of the County Board of Health failed to meet

at the appointed time. On October 7th the County Commissioners elected Dr. E. F. Strickland, of Bethania, county Superintendent.

FRANKLIN—Dr. E. S. Foster, Louisburg. Whooping-cough in town to a limited extent. A few cases of typhoid fever of mild type. The sanitary condition of the jail could be better if it were differently constructed; it is good as can be.

GASTON—Dr. J. H. Jenkins, Dallas. Malarial and typhoid fevers in some parts. Some dysentery.

GATES—Dr. I. W. Costen, Gatesville. No report.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. Malarial fever and dysentery in many parts. The rooms at the County Home are being nicely cleaned and lined.

GREENE—Dr. Joseph E. Grimsley, Snow Hill. Two cases of measles, three of whooping-cough and six of scarlatina. Malarial fever and follicular tonsillitis in some parts.

GUILFORD—Dr. W. J. Richardson, Greensboro. Six cases of diphtheria, seven of typhoid fever and one of pernicious malarial fever. Other malarial fevers in all parts. The jail is overcrowded, 26 in one room 10 by 30 feet. The house is clean but the ventilation is very poor.

HALIFAX—Dr. I. E. Green, Weldon. Very little sickness.

HARNETT—Dr. J. F. McKay, of Dickinson, has declined to serve longer as County Superintendent of Health, but sends a report voluntarily. Malarial fevers in all parts. An epidemic of hog cholera. The jail is kept as well as it is possible to keep a building unsuited for the purposes intended.

HAYWOOD—Dr. J. Howell Way, Waynesville. Eight cases of diphtheria and five of typhoid fever. Mild diar-

rheal disorders throughout the county. Many cases of pharyngitis and tonsillitis, some fatal. Drs. J. M. & J. H. Marsh report from Canton as follows: "Have had eight cases of diphtheria, three fatal, four convalescent, one uncertain yet; three spontaneous, others from contagion. Placards are posted, quarantine and disinfectants according to instructions. The cause we think was at or near a school house by a swamp into which three privies empty. Over 100 children were crowded in this building." A copy of Instructions for Quarantine and Disinfection has been sent to each physician in the county with a request to be on the alert for possible cause of diphtheria.

HENDERSON—Dr. J. L. Egerton, Hendersonville. No report.

HERTFORD—Dr. John W. Tayloe, Union. Two cases of typhoid fever and two of hemorrhagic malarial fever. Intermittent and remittent fevers in all parts. Some hog cholera.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. Three cases of typhoid fever. Bowel troubles and malarial fever.

JACKSON—Dr. W. F. Tompkins, Webster. Two cases of typhoid fever. Considerable diarrhœa. An epidemic of hog cholera.

JOHNSTON—Dr. L. L. Sasser, Smithfield. Scarletina reported from two places.

JONES—Dr. R. A. Whitaker, Trenton. No report.

LENOIR—Dr. James K. Parrott, of Lenoir, was elected superintendent by the County Board of Health.

LINCOLN—Dr. Thos. F. Costner, Lincolnton. A few cases of whooping cough and of typhoid fever. Bilious, remittent and intermittent fevers, due to the unusually low condition of the water courses. The Commissioners

are considering improvements at the County Home.

MCDOWELL—Dr. Geo. I. White, Marion. Whooping cough, 25 to 100 cases, and typhoid fever, 25 to 50, in nearly all parts.

MACON—Dr. S. H. Lyle, Franklin. Nine cases of diphtheria and three of typhoid fever. Catarrhal diseases in all parts. The diphtheria is not epidemic, one or two cases at a place, and now about stamped out. The jail needs privies badly. Dr. Lyle was re-elected by the County Board of Health.

MADISON—Dr. Jas. K. Hardwicke, Marshall. Two cases of scarlatina and twenty-one of typhoid fever. Catarrhal fever.

MARTIN—Dr. W. H. Harrell, Williamston. Four cases of typhoid fever.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. One case of scarlatina, three of diphtheria and six of typhoid fever reported. Malarial fever in several parts of county; that part of Charlotte, western section, known as Salversville, has been severely scourged with it. Have induced the City Board of Aldermen to pass an ordinance providing for a crematory for disposing of the city's garbage and it will be immediately built.

MITCHELL—Dr. C. E. Smith, Bakersville. No diseases to report.

MONTGOMERY—Dr. W. A. Simmons, Troy. Five cases of whooping-cough and two of typhoid fever. Bowel troubles in all parts. There has been almost an epidemic of continued fever, with now and then a case of typhoid.

MOORE—Dr. Gilbert McLeod, Carthage. One case of typhoid fever.

NASH—Dr. J. J. Mann, Nashville. Malarial and typhoid fevers in all parts.

Dr. Mann was re-elected Superintendent of Health.

NEW HANOVER—Dr. J. C. Shepard, Wilmington. Six cases of scarlatina, seven of typhoid fever, one of pernicious and five of hemorrhagic malarial fever. Ordinary malarial troubles in all parts.

NORTHAMPTON—Dr. H. W. Lewis, Jackson. Twenty-five cases of typhoid fever and three of hemorrhagic malarial fever. Cholera in hogs and chickens. In some sections cattle have died of black tongue. The prolonged drought, exposing the bottoms of swamps, ponds and ditches, has been the cause of much sickness in some sections.

ON SLOW—Dr. E. L. Cox, Jacksonville. Intermittent and remittent fevers in all parts of the county. An epidemic of hog cholera.

ORANGE—Dr. D. C. Parris, Hillsboro. Some cholera morbus and dysentery. Three cases of typhoid fever. Malarial fevers in northern and southern parts, owing possibly to low water in streams and ponds.

PAMLICO—No Board of Health.

PASQUOTANK—Dr. J. E. Wood, Elizabeth City. One case of scarlatina, three of typhoid fever and one of hemorrhagic malarial fever. Dysentery and malarial fever in various parts.

PENDER—Dr. Geo. F. Lucas, Currie. Malarial fevers of mild form to a limited extent in the eastern parts. Wherever pure water is used malaria and typhoid fevers are of rare occurrence. Cholera in hogs. In regard to the public institutions, Dr Lucas says: "We have an enlightened and humane Board of Commissioners who are very ready to assist me."

PERQUIMANS—Dr. John F. Speight, Hertford. No report.

PERSON—Dr. C. G. Nichols, Roxboro. No report.

PITT—Dr. Frank W. Brown, Greenville. There has been a great deal of malaria in most of its forms. There is scarlet fever in most parts of the county, four families have had it in town. It has not become epidemic. It was quarantined in town but not in the country. Roseola in town and country. Hog and chicken cholera in some parts. We have now a most excellent superintendent at the County Home.

POLK—Dr. C. J. Kenworthy, Tryon. No diseases reported.

RANDOLPH—Dr. T. T. Ferree, Ashboro. Ten cases of typhoid fever and three cases of hemorrhagic malarial fever, in various parts.

RICHMOND—Dr. W. H. Steele, Rockingham. Malarial fever of mild type in most parts and many cases of whooping-cough.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. No diseases reported. An epidemic of hog cholera.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. Three cases of typhoid fever. Typho-malarial fever in Rieds-ville and neighborhood.

ROWAN—Dr. John Whitehead, Salisbury. Thirteen cases of whooping-cough, one of scarlatina and two of typhoid fever. Bronchitis and malarial fever in various parts.

RUTHERFORD—Dr. E. B. Harris, Rutherfordton. Typhoid fever in several parts.

SAMPSON—Dr. Jno. A. Stevens, Clinton. Whooping-cough very prevalent. A few cases of malarial fever, one of typhoid and some bowel troubles. Hog cholera.

STANLY—Dr. J. N. Anderson, Albe-  
marle. Four cases of typhoid fever.  
Malarial fever and diarrhoea in all  
parts. We have a new and good court  
house; only a temporary jail but a con-  
tract has been let to build a new one.  
The houses at the county home are old  
but in reasonably good sanitary con-  
dition.

STOKES—Dr. W. L. McCanless, Dan-  
bury. Four cases of typhoid fever.

SURRY—Dr. John R. Woltz, of Dob-  
son, is the new Superintendent of  
Health. Two cases of putrid sore  
throat and eight of typhoid fever. Dys-  
entery in all parts. The inside walls of  
the jail are white-washed and the  
floors scoured every month. The rooms  
at the county home are large and the  
inmates are well cared for.

SWAIN—Dr. A. M. Bennett, Bryson  
City. Mild cases of typhoid fever in  
different parts, four cases reported.

TRANSYLVANIA—Dr. M. M. King, of  
Brevard, is the new Superintendent of  
Health. Three cases of typhoid fever.  
Some diphtheria heard of.

TYRRELL—Dr. Ab. Alexander, Co-  
lumbia. One case of typhoid fever.  
Very little sickness.

UNION—Dr. J. E. Ashcraft, Monroe.  
Ten cases of whooping-cough, four of  
scarlatina and six of typhoid fever.  
Catarrhal troubles.

VANCE—Dr. J. H. Tucker, Hender-  
son. Whooping-cough, malarial, mix-  
ed and typhoid fevers, of mild type, in  
many parts, especially the northern  
and eastern. The cold wave, following  
excessive heat, has given rise to a few  
cases of dysentery in Henderson and  
vicinity.

WAKE—Dr. P. E. Hines, Raleigh.  
Measles at the Penitentiary. Two  
cases of whooping-cough. Malarial

and typhoid fevers in all parts of the  
county heard from, twenty cases of  
typhoid reported. Two cases of per-  
nicious and three of hemorrhagic ma-  
larial fever.

WARREN—Dr. Geo. A. Foote, of  
Warrenton, is the new Superintendent  
of Health. Whooping-cough, bilious  
fever and a few sporadic cases of ty-  
phoid fever in some parts. The health  
of the county is better than I ever  
knew it and its sanitary condition is  
excellent.

WASHINGTON—No Board of Health.

WATAUGA—Dr. W. B. Council, of  
Boone. No sickness to report.

WAYNE—Dr. W. J. Jones, Jr., Golds-  
boro. One case of whooping-cough,  
two of scarlatina, four of typhoid fever  
and one of hemorrhagic-malarial fever.  
Malarial troubles in all parts.

WILKES.—Dr. J. M. Turner, Wilkes-  
boro. Two cases of diphtheria and  
eight of typhoid fever. Whooping-  
cough in the northern part. The con-  
dition of the jail is as good as could be  
expected with the present building.

WILSON.—Dr. Albert Anderson, Wil-  
son. A few cases of whooping-cough,  
forty of scarlatina, two or three of per-  
nicious and five of hemorrhagic-mala-  
rial fever. The scarlatina was mild and  
the provisions of the State law were  
carried out. Malarial fevers in all  
parts.

YADKIN—Dr. T. R. Harding, Yadin-  
ville. Typhoid fever in nearly all  
parts and a few cases of mild diph-  
theria.

YANCEY—Dr. J. L. Ray, Burnsville.  
Two cases of scarlatina, quarantined  
as required by law. Three cases of  
typhoid fever. The jail is in very good  
condition at last, after considerable  
wrangling. I hope it will be kept so.  
The home is about as usual; it should  
be better kept.

**Review of Diseases Reported for September, 1895.**

**BLACK TONGUE, IN CATTLE**—From Northampton.

**BOWEL DISEASES\***— From Burke, Iredell, Jackson, Montgomery, Orange, Sampson and Stanly—7 counties.

**BRONCHITIS**—From Rowan.

**CHOLERA-MORBUS**—From Orange.

**CHOLERA, IN CHICKENS**—From Bertie, Cabarrus and Northampton.

**CHOLERA, IN HOGS**—From Bertie, Chowan, Clay, Columbus, Harnett, Hertford, Jackson, Northampton, Onslow, Pender, Robeson and Sampson—12 counties.

**DIPHThERIA**—From Beaufort, Buncombe, Cherokee, Craven, Dare, Guilford, Haywood, Macon, Mecklenburg, Transylvania, Wilkes and Yadkin—12 counties.

**DYSENTERY**—From Gr'nville, Orange, Pasquotank, Surry and Vance.

**MALARIAL FEVER**—From Beaufort, Bertie, Bladen, Brunswick, Cabarrus, Chatham, Chowan, Clay, Craven, Davie, Duplin, Durham, Edgecombe, Forsyth, Gaston, Guilford, Granville, Greene, Harnett, Hertford, Iredell, Lincoln, Mecklenburg, Nash, New Hanover, Northampton, Onslow, Orange, Pasquotank, Pender, Pitt, Randolph, Richmond, Rowan, Sampson, Stanly, Vance, Wake, Warren, Wayne and Wilson—41 counties.

**MALARIAL FEVER, HEMORRHAGIC**—From Beaufort, Bertie, Edgecombe, Hertford, New Hanover, Northampton, Pasquotank, Randolph, Wake, Wayne and Wilson—11 counties.

**MALARIAL FEVER, PERNICIOUS**— From Craven, Guilford, New Hanover, Wake and Wilson.

**MEASLES**—From Duplin, Greene and Wake.

**SCARLATINA**—From Alexander, Bun-

combe, Craven, Duplin, Edgecombe, Greene, Johnston, Madison, Mecklenburg, New Hanover, Pasquotank, Pitt, Rowan, Union, Wayne, Wilson and Yancey—17 counties.

**TYPHOID FEVER**—From Alamance, Alexander, Ashe, Brunswick, Buncombe, Burke, Cabarrus, Clay, Cleveland, Columbus, Craven, Duplin, Forsyth, Franklin, Gaston, Guilford, Haywood, Hertford, Iredell, Jackson, Lincoln, McDowell, Macon, Madison, Martin, Mecklenburg, Montgomery, Moore, Nash, New Hanover, Northampton, Orange, Pasquotank, Randolph, Rockingham, Rowan, Rutherford, Stanly, Stokes, Surry, Swain, Transylvania, Tyrrell, Union, Vance, Wake, Warren, Wayne, Wilkes, Yadkin and Yancey—51 counties.

**WHOOPIING - COUGH** — From Buncombe, Cleveland, Durham, Edgecombe, Franklin, Greene, Lincoln, McDowell, Montgomery, Richmond, Rowan, Sampson, Union, Vance, Wake, Warren, Wayne and Wilkes—18 counties.

\*Cholera-Morbus, Cholera-Infantum and Dysentery when mentioned by reporters are given separate headings.

**Summary of Mortuary Reports for Sept., 1895. (Twenty-nine towns.)**

	White.	Col'd.	Total.
Aggregate population.....	89,122	64,963	154,085
Aggregate deaths.....	96	154	250
Representing annual death rate per 1000.....	12.9	28.6	19.5
<i>Causes of Death.</i>			
Typhoid fever.....	16	8	24
Malarial fever.....	6	16	22
Whooping Cough.....	0	1	1
Pneumonia.....	0	1	1
Consumption.....	7	24	31
Brain diseases.....	9	4	13
Heart diseases.....	6	11	17
Neurotic diseases.....	4	3	7
Diarrhoeal diseases.....	17	32	49
All other diseases.....	30	50	80
Accident.....	1	1	2
Suicide.....	0	1	1
Violence.....	0	2	2
	96	154	250
Deaths under 5 years.....	33	57	90
Still-born.....	6	7	13

## Condition of Jails and County Homes by Counties for September, 1895.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance...	good	17 (a)				good	34			
Alexander	fair	0				fair	8			
Alleghany										
Anson										
Ashe.....	good	6	600		3	good	9	900		2
Beaufort...	good	14				good	15			
Bertie.....	very good	11 (b)			3	very good	19		1	3
Bladen.....	very good	1				good	9			
Brunswick	†	4		1	0	†	12		0	0
Buncombe	good	92 (c)	453	20	40	good		900		
Burke.....	no change	6				good	12			
Cabarrus...	good	33 (d)	*	0	23	good	26	920	3	12
Caldwell....	crowded	16	*				1	*	3	6
Camden										
Carteret		0					0			
Caswell....	no change	27 (e)				no change	8			
Catawba...	good	9			6	good	36		12	10
Chatham...	good	17 (f)	*	2	9	very good	27	*	10	10
Cherokee...	fine					fine				
Chowan.....	good	22				good	6			
Clay.....	†	3					0			
Cleveland...	good	12			9	good	21			3
Columbus...	very good	8	*		4	very good	11	*		2
Craven.....	good	18	400-600	3		good	22	600	4	
Cumberland	good	16	800	8	16	excellent	19	1000	9	15
Currituck										
Dare.....	†	1				†	2			
Davidson...	no change	4	*	0	0	no change	26	720	3	2
Davie.....	†	4		0	2	fair	6		1	0
Duplin.....	good	2				good	13			
Durham.....		43 (g)					28			
Edgecombe	very good	67	975	0	4	very good	20	*	2	2
Forsyth....	good	26	1,000	10	4	good	24	*	6	2

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 11 in House of Correction. (b) Includes 10 in House of Correction. (c) Includes 58 in House of Correction. (d) Includes 28 in House of Correction. (e) Includes 26 in House of Correction. (f) Includes 9 in House of Correction. (g) Includes 32 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin .....	good †	9				very good	24			
Gaston .....	well kept					well kept				
Gates .....										
Graham .....										
Granville .....	very good	3	600	0	1	very good	29	600	2	4
Greene .....		0					4	*		2
Guilford .....	†	71 (a)					3			
Halifax .....	good	12	1,000	2	3	good	46	700	5	6
Harnett .....	†									
Haywood .....	first rate	8		0	4	good	7			
Henderson .....										
Hertford .....		3	*	0	1		8	*	1	2
Hyde .....										
Iredell .....	no change	34 (b)				no change	23			
Jackson .....		10	990	1	8		2	400		
Johnston .....										
Jones .....										
Lenoir .....										
Lincoln .....	good †	4	*	0	4	fair †	27			
McDowell .....	no jail					very good	12			
Macon .....	†	9	400	5	7		14	570	8	9
Madison .....	good	7	400	3	4	good	16	600	7	9
Martin .....	good	3	*	0	1	good	14	*	5	2
Mecklenburg .....	good	93 (c)	*			good	71	*		
Mitchell .....	good	14				good	8			
Montgomery .....	good	3	500			good	17	500		
Moore .....	good	5	*	0	2	good	5	*	1	4
Nash .....	very good	8	600	4	8	very good	26	1,000	6	10
New Hanover .....	fair	40	400	12	10	fair	24	900	22	6
Northampton .....	good	5	1,000	2	1	good	30	800	13	8
Onslow .....	crowded	11				fine	4			
Orange .....	bad	5	1,000	1	4	good	15	*	8	9
Pamlico .....										

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 16 in House of Correction. (b) Includes 26 in House of Correction. (c) Includes 80 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....	good	3	*	.....	.....	fair	25	*	3	.....
Pender.....	excellent	2	.....	0	1	excellent	5	.....	0	0
Perquimans.....	.....	2	.....	.....	.....	.....	6	.....	.....	.....
Person.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pitt.....	good	.....	.....	.....	.....	excellent	24	.....	.....	.....
Polk.....	good	10	.....	.....	.....	.....	.....	.....	.....	.....
Randolph.....	well kept	5	.....	3	8	well kept	38	.....	.....	.....
Richmond.....	good	17	.....	6	12	good	21	.....	.....	.....
Robeson.....	good	21	.....	.....	.....	good	12	.....	.....	.....
Rockingham..	good	9	1,000	.....	.....	good	39	400-700	18	.....
Rowan.....	.....	12	500	3	5	.....	22	500	12	10
Rutherford.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sampson.....	very good	11	.....	.....	.....	very good	17	.....	.....	.....
Stanly.....	†	2	*	0	2	fair	9	1,000	.....	.....
Stokes.....	good	8	600	2	4	good	11	600	3	4
Surry.....	good	13 (a)	332	.....	9	well kept	21	.....	.....	1
Swain.....	good	9	971	.....	.....	good	4	*	.....	.....
Transylvania.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tyrrell.....	.....	1	*	0	0	.....	1	*	0	1
Union.....	good	10	.....	.....	.....	good	22	.....	.....	.....
Vance.....	good	8	*	2	3	good	11	*	2	2
Wake.....	good	83 (b)	.....	.....	.....	good	76	.....	.....	.....
Warren.....	first rate	7	*	.....	2	first rate	18	*	.....	4
Washington.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watauga.....	first rate	10	.....	.....	.....	first rate	7	.....	.....	.....
Wayne.....	good	25 (c)	.....	.....	5	good	12	.....	.....	1
Wilkes.....	fair †	9	.....	.....	.....	fair	13	.....	.....	.....
Wilson.....	good	4	*	0	2	good	29	*	8	7
Yadkin.....	fair	4	.....	0	2	good	19	.....	0	5
Yancey.....	very good	4	*	0	3	†	5	.....	.....	.....

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendent of Health. (a) Includes 1 in House of Correction. (b) Includes 77 in House of Correction. (c) Includes 12 in House of Correction.



Mortuary Report for September, 1895.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrheal Diseases.	All Other Diseases.	Accident.	Suicide.	TOTAL DEATHS.	By Races.	By Towns	Deaths under 5 years.	Still Born.	
		By Races.	Total.	By Races.	Total.																					
Asheville..... Dr. E. C. Starnes	White. Colored.	8,000 4,000	12,000	9.0 15.0	11.0	2															6	5	11			
Charlotte..... Board of Health.	White. Colored.	10,855 8,716	19,651	14.4 32.7	22.6	4		2					4	1	4	5	3	6	6		1	13	34	37	2	
Durham..... Dr. J. M. Manning.	White. Colored.	4,500 3,500	8,000	10.7 0.0	6.0																	4	4			
Fayetteville..... Dr. J. V. McGougan.	White. Colored.	2,800 2,200	5,000	12.9 43.6	26.4			2					1	1	2	1	1					3	8	11	1	1
Goldsboro..... T. H. Bain, Esq.	White. Colored.	3,500 1,500	5,000	6.9 24.0	12.0			1						1	1	1	1					2	5	1		1
Greensboro..... Dr. W. J. Richardson.	White. Colored.	5,500 2,500	8,000	6.5 28.8	13.5								1			1		2	2			3	6	9		2
Henderson..... Dr. W. J. Judd.	White. Colored.	2,250 2,000	4,250	0.0 24.0	11.3									1	1							0	4	4		3
Hillsboro..... Dr. D. C. Parris.	White. Colored.	600 400	1,000	0.0 60.0	24.0																	0	0	0		2
Jacksonville..... Dr. E. L. Cox.	White. Colored.	400 200	600	30.0 0.0	20.0			1														1	1			
Lenoir..... Dr. A. A. Kent.	White. Colored.	800 300	1,100	15.0 40.0	21.8	1																1	2			1
Lexington..... Dr. R. L. Payne.	White. Colored.	1,800 500	2,100	0.0 0.0	0.0																	0	0			
Marion..... Dr. Geo. I. White.	White. Colored.	700 300	1,000	17.1 40.0	24.0	1																1	2			
Monroe..... Dr. J. M. Blair.	White. Colored.	1,800 600	2,400	6.7 20.0	10.0			1							1							1	2			
Oxford..... Dr. W. O. Baskerville	White. Colored.	1,600 1,400	3,000	0.0 8.6	4.0																	0	1			1
Pittsboro..... Dr. L. A. Hanks.	White. Colored.	350 250	600	0.0 0.0	0.0																	0	0			
Raleigh..... Dr. Jas. McKee.	White. Colored.	8,500 7,500	16,000	24.0 28.7	26.2	2		1					1	1	2	2	2	8				17	35	7		12
Rockingham..... Dr. W. H. Steele.	White. Colored.	1,300 450	1,750	9.2 0.0	6.8								1									1	1			
Rocky Mount..... Dr. G. L. Wimberley.	White. Colored.	1,700 800	2,500	7.1 90.0	33.6	1		1					1	2								1	7			7
Salem..... F. E. Keehn, Esq.	White. Colored.	3,942 342	4,284	15.2 0.0	14.0	1								1								5	5			2
Salisbury..... Dr. John Whitehead.	White. Colored.	3,000 2,000	5,000	12.0 18.0	14.4									1								3	6			12
Scotland Neck..... Mayor J. A. Perry.	White. Colored.	775 425	1,200	31.4 56.5	40.0	1								1								2	4			1
Southport..... L. A. Galloway, Esq.	White. Colored.	750 450	1,200	32.0 0.0	20.0									1								2	2			1
Statesville..... Dr. W. J. Hill.	White. Colored.	2,500 1,000	3,500	0.0 0.0	0.0																	0	0			
Tarboro..... Dr. Donald Williams	White. Colored.	1,300 1,200	2,500	9.2 20.0	16.0			1														1	3			
Washington..... Dr. Joshua Taylor.	White. Colored.	3,000 2,500	5,500	24.0 48.0	34.9	1		1						2	1							6	16			4
Weldon..... Mayor J. T. Gooch.	White. Colored.	700 750	1,450	0.0 32.0	16.5																	0	2			1
Wilmington..... Dr. J. C. Shepard.	White. Colored.	9,000 13,000	22,000	25.3 28.6	27.3	3		2					2	3	2	2	2	7				19	50			6
Wilson..... Dr. Albert Anderson	White. Colored.	2,000 1,500	3,500	6.0 40.0	24.0																	1	7			3
Winston..... Dr. John Bynum.	White. Colored.	5,200 4,800	10,000	6.9 45.0	25.2	1							1	5								3	21			1

## METEOROLOGICAL SUMMARY FOR NORTH CAROLINA, SEPTEMBER, 1895.

Furnished by the North Carolina Agricultural Experiment Station and State  
Weather Service.

H. B. BATTLE, PH. D., DIRECTOR.

C. F. VON HERRMAN, METEOROLOGIST.

STATIONS.	TEMPERATURE, (DEGREES FAHR.)								Mean Rel. Humidity.	Total Precipitation.	NO. OF DAYS.					
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.			Mean Daily Range.	Clear.	Partly Cloudy.	Cloudy.	Rainy.	Prevailing Wind.
Asheville.....	70.6	90	21 22	84.3	36	30	56.7	54	27.6	71.0	0.85	18	10	2	3	N
Bakersville.....																
Blowing Rock.....	67.6	83	21	75.9	32	30	59.2	51	16.7	.....	1.41	24	4	2	2	S W
Charlotte.....	76.2	98	22	86.3	48	30	66.1	50	20.2	67.4	0.33	17	11	2	6	S
Chapel Hill.....	76.4	102	23	90.0	35	30	62.9	67	27.2	.....	0.62	23	2	5	3	W
Henderson.....	76.8	103	22	89.0	46	30	64.5	57	24.5	72.0	1.10	19	9	2	4	S W
Littleton.....	75.8	103	23	89.2	33	30	62.3	70	26.9	.....	0.88	10	7	11	3	S W
Lenoir.....	71.0	88	22	80.2	46	28 30	64.3	42	15.9	.....	1.56	18	9	3	4	W S W
Louisburg.....	75.1	98	22	86.5	50	29	63.7	48	22.8	.....	1.32				3	
Mt. Airy.....	71.3	94	19	83.9	43	30	58.7	51	25.2	.....	0.70					S W
Mt. Pleasant.....	75.3	97	23	86.7	48	30	63.9	49	22.8	.....	1.79	13	9	8	7	
Mocksville.....	74.2	95	19 23	84.0	48	30	64.5	47	19.5	.....	1.09				5	S W
Newbern.....	78.4	100	23	89.6	52	16	67.3	48	22.3	.....	1.57	15	11	4	5	
Oak Ridge.....	74.4	97	19 23	86.8	42	30	61.9	55	24.9	.....	0.11	24	6	0	1	E
Pittsboro.....	73.4	95	22 23	81.3	46	30	62.5	49	21.8	.....	0.70	17	10	3	3	N E
Raleigh.....	75.9	98	18 23	86.1	50	30	65.7	48	20.4	69.9	0.38	14	12	4	5	S W
Rockingham.....	77.0	99	22	88.8	51	30	65.2	48	23.6	.....	3.29	22	6	2	5	W
Roxboro.....	75.4	100	20 23	88.6	45	30	62.2	55	26.4	.....						
Soapstone Mount.....	72.8	98	23	86.9	43	29 30	58.7	55	28.2	.....	0.28	12	14	4	2	S W
Saxon.....	72.8	98	22	87.2	36	30	58.4	62	28.8	.....	2.56	7	18	5	5	S W
Selma.....	75.7	100	23	87.2	49	29	64.2	51	23.0	.....	0.25				3	
Salisbury.....	76.7	100	23	87.1	45	30	66.3	55	20.8	.....	0.92				6	
Tarboro.....	77.2	104	22 23	91.2	47	16	63.3	57	27.9	.....	0.10	21	7	2	1	N E
Willeiton.....	74.4	98	20 21 23	85.6	48	30	63.3	50	22.3	.....	0.64	17	12	1	2	S
Weldon.....	75.2	99	23	86.6	48	16	63.8	51	22.8	.....	0.07	17	12	1	2	S
Wilmington.....	76.7	96	22	84.8	58	30	68.5	38	16.3	80.5	4.46	22	6	2	7	N E

### State Meteorological Summary for September, 1895.

Mean barometer 30.08 inches; normal for Sept. 30.08. Highest barometer 30.34 on the 16th at Raleigh. Lowest barometer 29.78 on the 29th at Kitty Hawk. Mean temperature 74.2 degrees; normal for Sept., 70.2. Highest temperature 104 on the 22d & 23d at Tarboro. Lowest temperature 32 on the 30th at Highlands & Blowing Rock. Average rainfall 1.25 inches; normal for Sept. 4.65 inches. Greatest monthly rainfall 4.46 inches at Wilmington; least monthly rainfall 0.05 inches at Kitty Hawk. Average number of clear days 18; partly cloudy 8; cloudy 4; rainy 3. Prevailing wind direction South-west. Average velocity 6.0 miles per hour. Normal direction for Sept. North-east; normal velocity 7.0 miles per hour.

Only one September during the past 22 years has a higher monthly mean temperature than September, 1895. The mean for September 1881 was 74.9 degrees. Rainfall for September 1895 is least recorded during past 22 years.





# BULLETIN

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RICHARD H. LEWIS, M. D., *Secretary and Treasurer*, Raleigh.

VOL. X.

DECEMBER, 1895.

No. 9.

## Impurities in Drinking Water.

A paper read before the Washington Health Conference by F. P. Venable, Ph. D., Professor of Chemistry in the State University.

The purity of the water supply is a question arousing a very anxious interest at present in the various communities of this and other States. And it is fully time that all were waking up to the extreme importance of the question. Next to the air we breathe, the freedom of the water we drink from all that endangers health should give us most concern.

It is right and proper that we should object to having our sugar mixed with barite, parched beans sold us for coffee and sulphuric acid for vinegar. Such adulterations as these are often dangerous and justly arouse our indignation because of the fraud and wrong connected with them. But none of them approach in insidious threat against health the pollution of that every day necessity, our drinking water.

It being granted then that pure

water is a necessity, the anxious citizen is inquiring how he shall decide as to this purity, by what tests he may detect pollution, and it is my object today to clear away, if possible, the technical mists and make this matter of water analysis a little clearer to the average water consumer.

I propose to divide the subject up as follows :

1. The Sources of Supply.
2. The Cause of Contamination or Pollution.
3. The nature of the impurities most commonly met with.
4. The Tests or Methods of Analysis.

### THE SOURCES OF SUPPLY.

According to location, our drinking water is drawn from springs, streams, wells, or stored up rainfall water.

In the case of springs, we have usually a very excellent, but a very inadequate source of supply. It does not often happen that the spring gushing out at the foot of some hill yields a supply

more than sufficient for one or two neighboring farm houses. For our purposes then it need scarcely be mentioned except as a possible source. It should be stated, however, that though often very pure all spring water is not above suspicion. Water coming from a hill, the sides of which are polluted must almost of necessity be polluted itself. I have in mind now a large spring, which formed part of the supply of a certain town outside this State. On the hillside was the very populous cemetery. It goes without saying that the water of that spring was quite unfit for drinking and caused much sickness wherever used. Often in the country we find the farm house and all the out-buildings placed upon the hillside and drained right into the spring which furnishes the water of the place.

In many towns in this State the most available source of supply is some country stream. These are unfortunately generally small. I say unfortunately because the smaller streams have less chance for self-purification than the larger ones, as the dilution is less. They are subject to a great many sources of pollution and can only be considered safe when the community owns and carefully guards the entire water-shed. One case of typhoid fever in a farm house bordering the stream or built upon an overhanging hill and so draining into it, could easily communicate the disease to hundreds of people.

The stables and outhouses of these farms are frequently placed upon the banks of a smaller branch, which thus has the filth of man and beast thrown into it, carries it down to the large stream and contaminates the whole.

But the chief supply for most of our towns, villages and scattered houses is in the wells and therein lies the great

danger. Not that well water may not be pure, but in most crowded communities it stands very little chance of retaining whatever may have been its original purity. Each well acts as a drain for the immediately surrounding neighborhood. The amount of surface drained depends, of course, upon the nature of the soil. It is surprising how great an extent of surface is drained by a deep well in a loose porous soil. Some experiments carried out at Memphis and elsewhere show that a deep well can be contaminated by filth more than a quarter of a mile distant. Often the filth of many years has accumulated upon and for a foot or more down, in this soil and the seepage of the rain and other water must of necessity carry it on down into the well. Knowing the impossibility of cleaning this surface or of keeping it clean as the population increases, sanitarians as a rule, look with disfavor upon wells as a reliance for the drinking water of thickly settled communities. There is no method known of purifying such a soil and no safety in the use of the wells after it has once become infiltrated with decomposing organic matter. It is an error to think that the mere cleaning out of a well contaminated in this way, can materially aid in its purification. Cleaning out removes the body of polluted water already standing in it only to make room for the inflow of that freshly polluted. Many have the idea that the abundant use of the water, lowering the level, bringing in fresh, preventing stagnation and splashing down a supply of fresh air are all aids to the purification, but it is manifest that these are methods quite inadequate to deal with the water filtering down through the mass of garbage, offal and poisoned earth.

This question of the use of wells is

one that sanitarians have to deal with everywhere. Even in large towns with abundant supply of pure water it is found impossible to make all discard the use of the wells their fathers dug. I know of a town in Virginia where clear, pure mountain water is supplied by the municipal authorities. Still many use the old wells. In the first three years after the introduction of this water supply there were sixty-three cases of typhoid fever, sixty of which were among those who used the well water. I might strengthen the ground I take with regard to the average well by giving you the analyses of water drawn from the famous Well of Mecca and from certain old wells of Spain. Suffice it to say that these were found to be literally liquid sewage. And the commission sent to examine into the condition of Havana, with a view to combating the yellow fever scourge in its home, found the soil of that fever-ridden city for several inches down simply a mass of festering filth. Now I will admit that some of this filth can be kept out by sinking a narrow, deep well and thoroughly lining it with iron tubing. Such a mode of procedure forces the water to go through a greater depth of soil before it can enter the well or draws its supply from the deep subterranean waters, cutting off that which we call the surface water. This method can often be of great use as has been shown in the eastern section of our State. But that it would be a safe remedy everywhere is disproven by the experience in New York City. Some very deep wells have been sunk there, really corresponding to artesian wells. They have pierced through the upper strata of loose soil, rock and clays to a depth of several hundred feet, and found there pockets or reservoirs filled with the city's sewage which has

soaked through to that and perhaps even greater depths. There is little or no chance for self purification on the part of the water which has thus sunk below the level at which it can obtain fresh supplies of oxygen.

As to the last source of supply—the use of cisterns, tanks, and other storage reservoirs for rain-water—I may say that the chance for pollution is three-fold. First, the impurities washed out of the air. This in crowded cities and in times of epidemics may be a dangerous source of pollution. Secondly, many impurities are washed down from the roofs on which the water is collected. Third, it has been found that the various cements used are not impervious to water, and that polluted water leaking from some near sewer can pass through the walls of an underground cistern and so contaminate the whole.

We have now gone over the different sources from which we draw our drinking water, and have seen how easily it can become polluted, in fact, how difficult it is to prevent this pollution, and how carefully we must watch and guard against it. It will be well next to look into the nature of these impurities and to form some idea as to their relative danger.

It is well for me to remark first that perfectly pure water is never seen, and is not desirable. If I were to prepare for you a goblet of chemically pure water, and I can assure you that it would cost me much time and labor to do this, you would probably content yourselves with the merest sip and reject the rest as being insipid or distasteful. The natural pure water of which we have been speaking contains certain impurities found in all waters, and hence we call these impurities normal impurities. These include cer-

tain gases gotten out of the atmosphere or soil, as oxygen, nitrogen and carbonic acid, and a few others in smaller amounts; then from the soil a number of mineral substances are taken up. These are usually in small amounts, and are the very same ones which are utilized in the animal organism. If these are present in excessive or abnormal amounts they act medicinally, and the water is called a mineral water. Of course these mineral waters often contain abnormal constituents such as alum, lithia, &c., not ordinarily present in drinking water. Perfectly pure water is insipid to us because we have become accustomed to the taste of these minerals and gases, and notice immediately the lack of flavor caused by their absence.

The more dangerous impurities are those of vegetable or animal origin and these again may be dead and undergoing the changes caused by decay or fermentation, or they may be living. The decaying organic substances are usually present in quantities too small, even in very impure waters, to be directly dangerous themselves. The danger from them lies rather in the fact that they afford, during their decay, an excellent feeding ground, or nutritious medium for the growth and multiplication of the living vegetable matter, or as we have grown accustomed to call them, the bacteria. The portion of the vegetable or animal matter which is especially necessary for the growth of these bacteria is that containing nitrogen, as the bacteria are themselves nitrogenous. This nitrogenous matter, during the decay, changes into either ammonia or nitric acid. The portion of the plant or animal which mainly yields this nitrogen is that which we call albuminoid, and is similar in nature to the white of eggs

or the lean muscular part of the meat. Now, let it be distinctly understood, that it is not maintained that the greatly diluted solution of these substances which we would get in an ordinarily impure well water is, of itself, a source of disease. It would greatly disgust us to know that we were drinking such stuff, but we might unconsciously partake of it and never know it. Some may recall the experiment of the famous, or infamous, German doctor who gave a number of his patients diluted sewage to drink for as much as thirty days, not letting them know the nature of the loathsome draught they were taking. He did not notice any bad effects from the experiment, and so concluded that sewage was a safe article of diet at all times. The same experiment is being constantly tried in our cities and towns. I do not doubt that many a person is enjoying his daily dose of diluted sewage from the old well in his back yard, and because it has not yet made him sick, or he has been able to lay the blame of any sickness upon some other cause, he concludes as Dr. Emmerich did, that the well is all right and its water entirely above suspicion.

Living organisms are present in all waters. Even if originally lacking they would be acquired very quickly on exposure to the air. These organisms are of many different kinds, but we can divide them into two divisions, the harmless and the disease-causing, pathogenic as they are called. These latter form the most dangerous impurity of water if we can so call them. Some of these organisms or bacteria as we shall call them, wage a busy warfare upon the others and succeed in destroying many of them. This doubtless brings to an end many pathogenic bacteria preventing their multiplica-



tion, but it will not do to trust to such means as our only safeguard. These bacteria are found in the air and in the soil. The germs seem to be almost everywhere waiting for some suitable medium upon which to settle and multiply. Bacteriologists claim to have found them even in the pure air of the higher Alps, and in hailstones coming from very elevated regions of our atmosphere. They are easily destroyed by sunlight and by dry air. They are generally found only in the first three feet in depth of the soil, reaching their maximum as to numbers at from six to eighteen inches. The walls of a well form a continuation of this life range so that one can find these at a considerable depth.

A full study of the impurities of water requires the services of an experienced chemist and a bacteriologist. I say advisedly an experienced chemist because I wish you to understand that I attach almost no importance to the various easy tests recommended by some for the use of any one who wishes to find out for himself whether the water is impure or not. In the first place, because qualitative tests alone are in this case of very little value, and further, because no good all-round test has ever been discovered. The permanganate test, the silver chloride, and others are often quite misleading, especially in untrained hands.

The chemist has to determine the total amount of solid matter, but he need not determine the nature of this mineral matter. It is only important to know that it does not exceed certain limits. Then he generally contents himself with obtaining a knowledge of the amount of chlorine, the amount of ammonia, of what he calls albuminoid ammonia, of nitric acid in the combined form as nitrates, and of the total

organic matter, and of nitrous acid as nitrites. He does not concern himself with the other impurities which may be present at all. The reasons for this mode of procedure are simple. In the first place, it is hopeless in our present stage of knowledge to attempt to determine all the different kinds of organic matter in the very minute amounts in which they may be present. Secondly, this knowledge, if we could get it, is not absolutely necessary. The chemist wishes to find, whether those forms of matter which best nourish the disease-germs are present. Animal organic matter is then most to be dreaded, and of this mainly the nitrogenous portion. If animal matter can be detected and thus the impurities traced to an animal origin, there may be a strong suspicion that disease germs are also to be found. As to the vegetable organic matter, he contents himself with burning it or using some oxidizing agent upon it merely to determine whether it is in excessive amount or not.

Considering then, first, the chlorine, the chemist regards this as pointing to common salt which is one of the most easily detected components of animal sewage. Of course some common salt will be found in any water which has percolated through any depth of earth. Sometimes, as near the ocean or large deposits of salt, the chlorine found in the water will be quite large in amount. The chemist must know something of the average amount of chlorine to be found in the water of the section from which the sample came in order that he may be able to decide whether the chlorine exceeds the normal amount or not. You will notice what a devious path he is forced to tread. First, he supposes that the chlorine found came from common salt, then he must fix

upon a certain amount of this as normal to that particular water; then he takes for granted that all chlorine in excess of that came from the salt of animal secretions. Where he is occupied with the repeated analysis of the same water throughout a long series of experiments, he is justified in these assumptions, but where it concerns one single analysis of an unknown water, he is guessing very much in the dark. The fact is, the chemical analysis of water is most useful when the same water is analysed week after week or month after month, and the changes in it carefully noted. This is done for the water supply of London, New York and many large cities, and should be done for all.

As to ammonia, the chemist distinguishes between two different kinds of ammonia; first, the free ammonia; this may come in part from the atmosphere but very little is usually gotten from this source, the rest of it comes from decaying organic matter which originally contained nitrogen. The second kind of ammonia he calls albuminoid ammonia. Many chemists object to this name but most of the analysts so report it in their analyses of waters submitted to them. It means the ammonia which is gotten by the action of strong chemicals upon the undecayed organic matter present in the water. It does not exist as such in the water but is formed by the treatment during the analysis. This of course points more directly to the presence of animal matter than the other ammonia and the chemist regards the healthfulness of the water as open to grave suspicion if much of it be found.

Some of the organic matter containing nitrogen in decaying changes into nitric acid rather than ammonia. The first stage of this oxidation is nitrous

acid which of course would only be found in the state of combination as nitrites. The nitric acid in the same way would be nitrates. These may be gotten from the air but only in very small amounts.

We have seen then that the chemist looks for a few things in the water not because they are in themselves dangerous but because he believes that they point to dangerous constituents. And he chooses these furthermore because he has for these some of the most delicate tests in his entire repertoire and it is incumbent upon him to detect them when they are present only in a few parts in the million of water or even in the ten million. You must not blame him for this. So subtle are the dangers which may lurk in a polluted water that they are almost beyond our clumsy grasp. The chemist is reduced to guess work. He is on the outlook for danger signals. If he is put in control of a water supply and watches it as an engineer does his train he can detect the red flag in time; but he can speak with certainty only of a very impure water indeed when he is allowed only one glance at it.

I will mention that the chemist often reports other things as determined besides those mentioned but they are of minor importance and the practice concerning them is not uniform.

When the chemist is at fault who will help us decide whether the water is impure or not? Bacteriologists have shown themselves very helpful in ferreting out those living organisms mentioned as the most dangerous of all the impurities. They can roughly count the number of the bacteria and they can give some idea as to their nature whether dangerous or not but they cannot yet tell us all that we would like to know about these pest-breeding germs.

The combined work of chemist and bacteriologist is incomplete and unsatisfactory without the aid of the sanitary engineer who can examine the surroundings of the well, the watershed of the stream, &c.

Summary of Reports from County Superintendents of Health, for November, 1895 (eighty-one counties reporting).

In the blanks on which these reports are made the following items are called for:

1. The number of cases of small pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.

2. The diseases which have been prevalent in the county and in what parts.

3. Epidemics among domestic animals.

4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction, and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. Several cases of typhoid fever at Altamahaw Mills

ALEXANDER—Dr. T. F. Stevenson, Taylorsville. One case of typhoid fever.

ALLEGHANY—Dr. Robt. Thompson, Sparta. Two cases of scarlatina. Some pneumonia, several cases of diphtheria, and eleven of typhoid fever in the middle and western parts.

ANSON—Dr. E. S. Ashe, Wadesboro. No report.

ASHE—Dr. L. C. Gentry, Crumpler. Seven cases of diphtheria and several of

typhoid fever in the eastern part. Some hog cholera.

BEAUFORT—Dr. Joshua Tayloe, Washington. Hog cholera.

BERTIE—Dr. H. V. Dunstan, Windsor. One case of diphtheria, one of typhoid fever, one of pernicious and four of hemorrhagic malarial fever. Other malarial diseases. Hog cholera. An artesian well is being bored in Windsor.

BLADEN—Dr. Newton Robinson, Elizabethtown. Very little sickness of any kind.

BRUNSWICK—Dr. D. I. Watson, Southport. No diseases to report. The County Commissioners are making arrangements to move the home near to the county seat.

BUNCOMBE—Dr. E. C. Starnes, Asheville. A few cases of measles. Sanitary condition of public buildings, especially the convict camp, better than ever before.

BURKE—Dr. J. L. Laxton, Morganton. One case of measles and two of typhoid fever. Mumps. Little sickness.

CABARRUS—Dr. Robert S. Young, Concord. Two cases of diphtheria and eleven of typhoid fever. Catarrhal and chronic malarial diseases in all parts. The health of this county is uncommonly good and that of the boarding and day schools was never better.

CALDWELL—Dr. A. A. Kent, Lenoir. Eight cases of typhoid fever.

CAMDEN—No Board of Health.

CARTERET—Dr. George N. Ennett, Beaufort. Four cases of scarlatina, one of diphtheria, one of typhoid fever and one of hemorrhagic malarial fever. Our epidemic of scarlatina is somewhat under control and would have

been more so if the quarantine could have been made more efficient. There are evidently more than four cases, but they have not been reported.

CASWELL—Dr. W. O. Spencer, Yanceyville. Some catarrhal fever and malarial troubles. The jail is heated by a furnace in the basement, which is in a very bad condition—the hot air furnished the cells is very impure and the ventilation very imperfect. The conditions have been repeatedly reported to the authorities without effect.

CATAWBA—Dr. J. M. McCorkle, Newton. No report.

CHATHAM—Dr. L. A. Hanks, Pittsboro. Six cases of typhoid fever. Bronchial affections.

CHEROKEE—Dr. J. F. Abernathy, Murphy. It is rumored that diphtheria has again invaded the mountainous part of the county, with one death as a result. Infected houses are under rude quarantine.

CHOWAN — Dr. R. H. Winborne, Rockyhook. Several fatal cases of diphtheria. A few cases of typhoid fever. Malarial fevers to a limited extent in all parts. Some hog cholera. The sanitary condition of the county could be improved by better drainage of the lowlands. The commissioners have ordered the rooms at the home to be ceiled.

CLAY—Dr. W. E. Sanderson, Hayesville. Two cases of typhoid fever, a few cases of measles. An epidemic of hog cholera. Sanitary condition of county not so good on account of low water exposing cesspools and bottoms of fish ponds.

CLEVELAND—Dr. O. P. Gardner, Shelby. Measles and whooping cough in many parts. The sewerage of the jail is improved.

COLUMBUS—Dr. I. Jackson, Whiteville. Five cases of typhoid fever. Some catarrhal troubles and dysentery of a mild character. Hog cholera in some parts, but not half so much as in former years.

CRAVEN—Dr. J. W. Duguid, Newbern. One case of typhoid fever. The public building in course of erection here is making good progress.

CUMBERLAND—Dr. J. Vance McGougan, Fayetteville. One case of diphtheria and two of pernicious malarial fever. Hog cholera in some parts.

CURRITUCK—No Board of Health.

DARE—Dr. W. B. Fearing, Manteo. Seven cases of scarlatina and one of typhoid fever. Scarlatina in South End and spreading. It is a mild form and since the first fight, physicians are not called to attend cases.

DAVIE—Dr. James McGuire, Mocksville. A few cases of malarial fever.

DAVIDSON—Dr. R. L. Payne, Lexington. Rôtheln in scattered parts. We regret very much the loss to the State caused by the removal of Dr. Payne to Norfolk, Va. (Secretary).

DUPLIN—Dr. J. C. Grady, Magnolia. Typhoid and malarial fevers in all parts. An epidemic of hog cholera. The low condition of creeks and swamps, exposing their bottoms, has caused much malarial fever. Some building has been done at the county home.

DURHAM—Dr. J. M. Manning, Durham. Catarrhal and malarial troubles in nearly all parts. Two cases of hemorrhagic malarial fever occurred in one family on New Hope Creek and both were fatal.

EDGECOMBE—Dr. Donald Williams, Tarboro. One case of scarlatina, promptly quarantined. Very healthy.

FORSYTH — Dr. E. F. Strickland, Bethania. Malarial fever in all parts.

FRANKLIN—Dr. E. S. Foster, Louisburg. No sickness to report. Health of county never better.

GASTON—Dr. J. H. Jenkins, Dallas. Colds, influenza, and several cases of pneumonia. Some hog cholera.

GATES—Dr. I. W. Costen, Gatesville. No report.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. Pneumonia and dysentery in some parts.

GREENE—Dr. Joseph E. Grimsley, Snow Hill. Five cases of scarlatina and seven of typhoid fever. Malarial fever in most parts. Hog cholera in north and east.

GUILFORD—Dr. W. J. Richardson, Greensboro.

HALIFAX—Dr. I. E. Green, Weldon. Three cases of hemorrhagic malarial fever. Other malarial troubles of mild type.

HARNETT—Reporter, Dr. J. F. McKay, Dickinson. One case of scarlet fever and a few of catarrhal fever and dysentery. Very little sickness.

HAYWOOD — Dr. J. Howell Way, Waynesville. Six cases of diphtheria in Clyde and Canton in first part of month. No recent cases. Four of typhoid fever. Severe colds and tonsillitis very prevalent. Measles and mumps in two townships.

HENDERSON—Dr. J. L. Egerton, Hendersonville. No report.

HERTFORD—Dr. John W. Tayloe, Union. Three cases of hemorrhagic malarial fever. Intermittent fever in all parts. An epidemic of hog cholera.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. Six cases of typhoid fever. Some pneumonia, bronchial and bowel troubles.

JACKSON—Dr. W. F. Tompkins, Webster. Two cases of whooping cough. Influenza in some parts. Some hog cholera.

JOHNSTON—Dr. L. L. Sasser, Smithfield. One case of scarlatina and six of typhoid fever. Malarial and catarrhal troubles. Hog cholera reported from many sections. I believe that its general prevalence is due to the fact that we do not have the stock law in our county.

JONES—Dr. R. A. Whitaker, Trenton. No report.

LENOIR—Dr. James K. Parrott, Kinston. Acute bronchitis and coryza and intermittent fever in most parts. The country districts, as usual, are being drained by ditches. The town commissioners have inaugurated a first-class system of partial surface drainage which will be of great sanitary benefit. The jail is in good condition except that it should be better drained and needs sewerage badly. My suggestions as to ventilation have been followed.

LINCOLN—Dr. Thos. F. Costner, Lincolnton. Health of county good. Some measles. A few cases of typhoid fever heard of.

MCDOWELL—Dr. Geo. I. White, Marion. Six cases of typhoid fever. Whooping cough in nearly all parts.

MACON—Dr. S. H. Lyle, Franklin. Three cases of whooping cough, four of diphtheria and six of typhoid fever. Colds in all parts. An epidemic of hog cholera.

MADISON—Dr. Jas. K. Hardwicke, Marshall. Ten cases of typhoid fever.

MARTIN—Dr. W. H. Harrell, Williamston. No diseases to report.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. Measles in all parts and

epidemic. The crematory for the city is nearly completed.

MITCHELL—Dr. C. E. Smith, Bakersville. Typhoid fever in some parts.

MONTGOMERY—Dr. W. A. Simmons, Troy. Five cases of whooping cough and two of typhoid fever. There have been some indescribable skin affections this fall and some chicken pox. Otherwise remarkably healthy.

MOORE—Dr. Gilbert McLeod, Carthage. No report.

NASH—Dr. J. J. Mann, Nashville. No report.

NEW HANOVER—Dr. J. C. Shepard, Wilmington. Three cases of scarlatina, one of diphtheria, one of typhoid fever, and two of hemorrhagic malarial fever and other malarial troubles in all parts. The condition of the public buildings is as good as circumstances will permit.

NORTHAMPTON—Dr. H. W. Lewis, Jackson. Three cases of hemorrhagic malarial and eight of typhoid fever. Other malarial diseases. Roup among fowls and cholera among hogs.

ONSLOW—Dr. E. L. Cox, Jacksonville. Five cases of hemorrhagic malarial fever. The court house has been thoroughly cleaned.

ORANGE—Dr. D. C. Parris, Hillsboro. One case of typhoid fever, and one of pernicious malarial fever. Respiratory diseases in all parts.

PAMLICO—No Board of Health.

PASQUOTANK—Dr. J. E. Wood, Elizabeth City. One case of scarlatina and four of typhoid fever. Malarial fevers in all parts. The home is being plastered and whitewashed.

PENDER—Dr. Geo. F. Lucas, Currie. One case of typhoid fever. Bronchial troubles.

PERQUIMANS—Dr. John F. Speight,

Hertford. Four cases of typhoid fever. Bronchitis, intermittent and remittent fevers.

PERSON—Dr. R. A. Morton, Roxboro, is the new Superintendent of Health. No diseases reported.

PITT—Dr. Frank W. Brown, Greenville. Twelve cases of whooping cough, one of typhoid, and two of hemorrhagic malarial fever. Colds, some pneumonia and malarial fevers in several parts. Some attention is being paid to sanitation in town and country.

POLK—Dr. C. J. Kenworthy, Tryon. Two cases of diphtheria.

RANDOLPH—Dr. T. T. Ferree, Ashboro. A few cases of typhoid fever.

RICHMOND—Dr. W. H. Steele, Rockingham. A few cases of whooping cough and one of diphtheria. Malarial fever of mild type in some parts.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. No diseases reported.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. Two cases of typhoid fever.

ROWAN—Dr. John Whitehead, Salisbury. Three cases of typhoid, one of hemorrhagic malarial fever and one of scarlatina.

RUTHERFORD—Dr. E. B. Harris, Rutherfordton. Measles and whooping cough and typhoid fever in many parts. The latter abating but the first two increasing.

SAMPSON—Dr. Jno. A. Stevens, Clinton. Two cases of typhoid and a few of malarial fevers. Hog cholera.

STANLY—Dr. J. N. Anderson, of Albemarle, has resigned, and Dr. D. P. Whitley, of Millingport, is his successor. Less sickness than usual.

STOKES—Dr. W. L. McCanless, Danbury. No diseases reported.

SURRY—Dr. John R. Woltz, Dobson.

Five cases of diphtheria in southwestern part.

SWAIN—Dr. A. N. Bennett, Bryson City. One case of typhoid fever. Some whooping cough yet.

TRANSYLVANIA—Dr. M. M. King, Brevard. Measles, fifty cases. Mumps and whooping cough.

TYRRELL—No report.

UNION—Dr. J. E. Ashcraft, Monroe. Measles, epidemic. One case of scarlatina, ten of typhoid and fifteen of pernicious malarial fever. Catarrhal fever in town and country.

VANCE—Dr. J. H. Tucker, Henderson. A few cases each of whooping cough, mild malarial, catarrhal and typhoid fevers and of pneumonia. Steps are being taken to enlarge and otherwise improve the jail building.

WAKE—Dr. P. E. Hines, Raleigh. One case of scarlatina, three of varicella and two of typhoid fever. Some bronchitis, catarrhal and intermittent fevers. Less sickness than usual. Only two reports received from thirty blanks previously sent to the profession.

WARREN—Dr. Geo. A. Foote, Warrenton. Mild malarial fever and whooping cough. Distemper in dogs.

WASHINGTON—No Board of Health.

WATAUGA—Dr. W. B. Councill, Boone. Three cases of mild typhoid, and one of pernicious malarial fever. Mumps in Boone township.

WAYNE—Dr. W. J. Jones, Jr., Goldsboro. Four cases of scarlatina and two of typhoid fever. Malarial troubles in all parts.

WILKES—Dr. J. M. Turner, Wilkesboro. Whooping cough and typhoid fever. The condition of the home could be greatly improved.

WILSON—Dr. Albert Anderson, Wil-

son. Intermittent and remittent fevers in some parts.

YADKIN—Dr. T. R. Harding, Yadkinville. Diphtheria and typhoid fever in some parts.

YANCEY—Dr. J. L. Ray, Burnsville. A few cases of whooping cough and scarlatina. The jail is as clean as it could well be kept without water works. The home is about as usual. It needs underpinning before the weather gets colder.

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Review of Diseases Reported for November,  
1895.

BOWEL DISEASES\*—From Iredell.

BRONCHITIS—From Chatham, Iredell, Orange, Pender, Perquimans and Wake.

CHOLERA, IN HOGS—From Ashe, Beaufort, Bertie, Chowan, Clay, Columbus, Cumberland, Duplin, Gaston, Greene, Jackson, Johnston, Macon and Sampson—14 counties.

DIPHThERIA—From Alleghany, Ashe, Bertie, Cabarrus, Carteret, Cherokee, Chowan, Cumberland, Haywood, Macon, New Hanover, Polk, Richmond, Surry and Yadkin—15 counties.

DISTEMPER IN DOGS—From Warren.

DYSENTERY—From Columbus, Granville, and Harnett.

INFLUENZA—From Gaston and Jackson.

MALARIAL FEVER—From Bertie, Carteret, Chowan, Cumberland, Davie, Duplin, Durham, Forsyth, Greene, Halifax, Hertford, Johnston, Lenoir, Mecklenburg, New Hanover, Northampton, Onslow, Pasquotank, Perquimans, Pitt, Richmond, Rowan, Sampson, Vance, Wake, Warren, Wayne and Wilson—28 counties.

**MALARIAL FEVER, HEMORRHAGIC**—From Bertie, Carteret, Durham, Halifax, Hertford, New Hanover, Northampton, Onslow, Pitt and Rowan—10 counties.

**MALARIAL FEVER, PERNICIOUS**—From Bertie, Cumberland, Orange, Union and Watauga—5 counties.

**MEASLES**—From Buncombe, Burke, Clay, Cleveland, Haywood, Mecklenburg, Rutherford, Transylvania and Union—9 counties.

**MUMPS**—From Burke, Haywood, Transylvania and Watauga.

**PNEUMONIA**—From Alleghany, Gaston, Granville, Iredell, Pitt and Vance—6 counties.

**SCARLATINA**—From Alleghany, Carteret, Dare, Edgecombe, Greene, Harnett, Johnston, New Hanover, Pasquotank, Rowan, Union, Wake, Wayne and Yancey—14 counties.

**TYPHOID FEVER**—From Alamance, Alexander, Alleghany, Ashe, Bertie, Burke, Cabarrus, Caldwell, Chatham, Chowan, Clay, Columbus, Craven, Dare, Duplin, Greene, Haywood, Iredell, Johnston, Lincoln, McDowell, Macon, Madison, Mitchell, Montgomery, New Hanover, Northampton, Orange, Pasquotank, Pender, Perquim-

ans, Pitt, Randolph, Rockingham, Rowan, Rutherford, Sampson, Swain, Union, Vance, Wake, Watauga, Wayne, Wilkes and Yadkin—45 counties.

**WHOOPIING - COUGH**—From Cleveland, Jackson, McDowell, Macon, Montgomery, Pitt, Richmond, Rutherford, Swain, Transylvania, Vance, Warren, Wilkes and Yancey—14 counties.

\*Cholera-Infantum, Cholera-Morbus, and Dysentery, when mentioned by reporters, are given separate headings.

Summary of Mortuary Reports for Nov., 1895.  
(Thirty towns.)

	White.	Col'd.	Total.
Aggregate population.....	90,822	64,763	155,585
Aggregate deaths.....	95	88	183
Representing annual death rate per 1000.....	12.6	16.3	14.1
<i>Causes of Death.</i>			
Typhoid fever.....	10	2	12
Scarlet fever.....	1	0	1
Malarial fever.....	0	3	3
Diphtheria.....	2	0	2
Whooping Cough.....	0	2	2
Measles.....	1	1	2
Pneumonia.....	10	5	15
Consumption.....	20	22	42
Brain diseases.....	7	2	9
Heart diseases.....	8	5	13
Diarrhœal diseases.....	12	6	18
All other diseases.....	21	34	55
Accident.....	3	6	9
	95	88	183
Deaths under 5 years.....	21	30	51
Still-born.....	8	9	17



## Condition of Jails and County Homes by Counties for November, 1895.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance...	good	14 (a)				good	34			
Alexander .	no change	5			4	no change	7			3
Alleghany...	fair	0				fair	7			
Anson .....										
Ashe .....	good	3			1	good	9			1
Beaufort ...	fair	25				fair	15			
Bertie. ....	very good	13 (b)			3	very good	19		3	3
Bladen. ....	only fair	2				very fair	8			
Brunswick ..	no change	2	*	0	0	†	11	*	0	0
Buncombe .	good †	97 (c)	457	26	55	good	237	*	14	13
Burke.....	no change	10				no change	11			
Cabarrus ...	good	19 (d)	*	4	8	good	26	*	6	12
Caldwell....		6	*	0	3		2	*	0	1
Camden .....										
Carteret .....	good	2	1,000	2	2	good	0			
Caswell ...	†	13 (e)				fair	23			
Catawba .....										
Chatham....	very good	18 (f)	*	6	10	very good	26	*	10	10
Cherokee....	crowded	15				good	4			
Chowan .....	well kept	12	*			well kept †	6	*	2	0
Clay.....	fair	4					0			
Cleveland ...	†	12	1,000		8		18	900		4
Columbus ...	good	8	*		3	good	13	*		0
Craven .....	good	18				good	24			
Cumberland	crowded	22	800			very good	16			
Currituck ..										
Dare.....	very good	1				very good	0			
Davidson....	no change	4	*	0		no change	26	721	0	2
Davie. ....	no change	2		1	2	no change	9		1	0
Duplin.....	fair	4	600		1	fair †	13	500	1	2
Durham .....		35 (g)	* (h)				23	*		
Edgecombe	fair	11	*	1	3	fair	23	*	2	2
Forsyth.....	good	40	1,000	8	20	good	27	*	8	7

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) All in House of Correction. (b) Includes 11 in House of Correction. (c) Includes 55 in House of Correction. (d) Includes 14 in House of Correction. (e) Includes 11 in House of Correction. (f) Includes 10 in House of Correction. (g) Includes 24 in House of Correction. (h) For House of Correction, 361.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin .....	no change	5	1,000			no change	27	450		
Gaston .....	well kept					well kept				
Gates .....										
Graham .....										
Granville.....	good	10	600	2	5	good	30	600	2	4
Greene .....	very good	0				very good	6	1,000	3	2
Gulford .....										
Halifax.....	good	16	1,000	3	2	good	43	700	5	7
Harnett .....										
Haywood .....		21					7			
Henderson .....		2	*		1		6	*		1
Hertford .....										
Hyde .....										
Iredell .....	no change	30 (a)				no change	23			
Jackson .....	very good	13	609	2	8	very good	3	211	0	0
Johnston .....	fair	11	1,000	6	6	fair	15	1,000	4	1
Jones .....										
Lenoir .....	better †	5					0			
Lincoln .....	fair	1	*	1	1	good	26	600	13	6
McDowell .....										
Macon .....	no change	4		2 <sup>o</sup>	3	no change	13		4	8
Madison.....	crowded	30	300	7	8	good	20	500	9	10
Martin.....	good	4	*	0	2	good	12	1,000	5	3
Mecklenburg ..	good	113 (b)	*			good	60	1,000		
Mitchell .....	good	18				good	10			
Montgomery...	very good	2	500			very good	16	500		
Moore .....										
Nash .....										
New Hanover .	well kpt †	41 (c)	400	13	24	well kept	25	*	23	9
Northampton .	good	4	1,000			good	33	800		
Onslow .....	very good	2			1	very good	5			1
Orange .....	not good	6	500	1	2	good	15	1,000	8	9
Pamlico .....										

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 20 in House of Correction. (b) Includes 86 in House of Correction. (c) Includes 7 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....		2	*	0	0	†	27	*	2	
Pender.....	good	0		0	0	good	5		0	0
Perquimans.....		0					7			
Person.....										
Pitt.....	good	7	*		4	good	23	*		2
Polk.....		7	700	3	4		0			
Randolph.....	fair	6				good	34			
Richmond.....	good	20	722	2	17		20	*	4	8
Robeson.....	good	16				good	14			
Rockingham..	good	16	627			good	39	400-700	17	
Rowan.....										
Rutherford.....	good	12			8	good	14			3
Sampson.....	very good	5				very good	17			
Stanly.....	good	1	*			good	11	*		
Stokes.....	good	9	500	3		good	12	600		4
Surry.....	good	14 (a)	365		4	good	22			
Swain.....	good	7				good	4			
Transylvania..	good	2	*			good	5	*		
Tyrrell.....										
Union.....	good	12				good	20			
Vance.....	fair	10	*	1	5	excellent	11	*	2	2
Wake.....	very good	91 (b)				very good	64			
Warren.....	good	3	*	0		good	21	*		2
Washington.....										
Watauga.....	very good	5				very good	7			
Wayne.....	good	16 (c)			4	good	12			1
Wilkes.....	no change	9				†	12			
Wilson.....	good	6	*	1	3	good	28	*	6	8
Yadkin.....	fair	6		0	2	good	20		0	7
Yancey.....	very good†	9		0	5	†	4			

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 1 in House of Correction. (b) Includes 68 in House of Correction. (c) Includes 8 in House of Correction.

Mortuary Report for November, 1895.

Table with columns for Towns and Reporters, Races, Population (By Races, Total), Temporary Annual Death Rate per 1,000, and various diseases (Typhoid Fever, Scarlet Fever, Malarial Fever, Diphtheria, Whooping Cough, Measles, Pneumonia, Consumption, Brain Diseases, Heart Diseases, Neurotic Diseases, Diarrheal Diseases, All Other Diseases, Accident, Suicide, Violence). It also includes columns for Total Deaths (By Towns) and Deaths under 5 years (Still Born).

Mortuary Report for November, 1895.—Continued.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrhœal Diseases.	All Other Diseases.	Accident.	Suicide.	Violence.	TOTAL DEATHS.						
		By Races.	Total.	By Races.	Total.																	By Races	By Towns.					
																								Deaths	Under 5 years.			
<b>WASHINGTON</b> ..... } Dr. Joshua Taylor. }	White.	3,000	5,500	20.0	24.0	..	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..	5	6	3	..		
	Colored.	2,500		28.8		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	5	..
<b>WELDON</b> ..... } Mayor J. T. Gooch. }	White.	700	1,450	0.0	0.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0	0	..	..	
	Colored.	750		0.0		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>WILMINGTON</b> ..... } Dr. J. C. Shepard. }	White.	9,000	22,000	10.7	14.7	..	..	..	..	..	..	..	1	1	..	..	1	4	1	..	..	..	..	8	27	1	1	
	Colored.	13,000		17.5		..	..	..	..	..	..	..	..	..	3	1	..	..	3	12	..	..	..	..	..	19	6	6
<b>WILSON</b> ..... } Dr. Albert Anderson }	White.	2,000	3,500	12.0	10.3	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	3	..	..
	Colored.	1,500		8.0		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..
<b>WINSTON</b> ..... } Dr. John Bynum. }	White.	5,200	10,000	16.1	.....	..	..	..	..	..	..	..	..	1	..	..	2	3	1	..	..	..	..	..	7	20	..	..
	Colored.	4,800		32.5		..	..	..	..	..	..	..	..	..	8	1	..	..	1	3	..	..	..	..	..	..	13	3

\*The reporters for the cities and towns printed in bold faced type have signed this certificate: "I hereby certify that this report gives the whole number of deaths occurring within the corporate limits during the above month."

**METEOROLOGICAL SUMMARY FOR NORTH CAROLINA, NOVEMBER, 1895.**  
 Furnished by the North Carolina Agricultural Experiment Station and State  
 Weather Service.

H. B. BATTLE, PH. D., DIRECTOR.

C. F. VON HERRMAN, METEOROLOGIST.

STATIONS.	TEMPERATURE, (DEGREES FAHR.)										NO. OF DAYS.				Prevailing Wind.	
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range.	Mean Rel. Humidity.	Total Precipitation.	Clear.	Partly Cloudy.	Cloudy.		Rainy.
Asheville.....	49.4	75	8 9	61.0	23	21 25	37.9	52	23.1	74	2.78	13	7	10	7	E
Charlotte.....	51.0	76	9	59.9	25	21	42.1	51	17.8	74	2.39	11	10	9	8	NE
Chapel Hill.....	50.0	79	9	60.4	22	21	39.5	57	20.9	.....	4.67	15	7	8	9	W
Fayetteville.....	53.2	78	9	61.3	28	21	45.0	50	16.3	.....	2.21	9	5	16	9	N
Littleton.....	50.1	79	9	59.1	27	28 30	41.1	52	18.0	.....	1.91	9	3	18	10	.....
Lenoir.....	48.0	75	9	59.7	23	21	41.0	52	15.7	.....	2.22	12	8	10	5	NE
Louisburg.....	50.2	80	9	60.9	23	21	39.5	57	21.4	.....	2.40	.....	.....	.....	6	.....
Mt. Airy.....	49.6	74	9	60.3	22	22	38.8	52	21.5	.....	2.66	.....	.....	.....	7	SW
Mt. Pleasant.....	51.0	77	9	62.2	19	21	39.8	58	22.4	.....	2.18	10	6	14	8	NE
Moncre.....	51.2	79	9	62.2	25	21	40.2	54	22.0	.....	3.25	16	6	8	9	NE
Newbern.....	57.0	84	10	67.1	27	21	46.8	57	20.3	.....	4.94	.....	.....	.....	13	.....
Oak Ridge.....	49.6	75	9	60.9	24	21	38.3	51	22.6	.....	2.43	16	7	7	10	NW
Pittsboro.....	47.0	77	8	56.4	24	21	37.5	53	18.9	.....	5.57	13	7	10	5	NE
Raleigh.....	51.2	78	9	60.0	26	21	42.5	52	17.5	78	2.84	11	8	11	10	N
Rockingham.....	52.7	80	9	63.8	24	21	41.6	56	22.2	.....	2.72	15	7	8	4	.....
Roxboro.....	49.4	76	9	60.1	23	21	38.6	53	21.5	.....	3.33	11	4	15	3	.....
Soapstone Mount.....	48.7	79	9	62.6	18	21	34.8	61	27.8	.....	2.71	18	15	7	7	SW
Saxon.....	48.2	75	9	59.4	21	21	36.9	54	22.5	.....	2.38	6	13	11	7	NE
Southport.....	56.8	80	8	65.7	27	21	47.9	53	17.8	.....	3.90	7	11	10	11	N
Salisbury.....	50.0	76	9	60.8	22	21	39.2	55	21.6	.....	2.75	.....	.....	.....	4	.....
Tarboro.....	52.4	81	9	64.7	23	22	40.1	58	24.6	.....	2.26	10	8	12	11	NE
Waynesville.....	46.8	73	8 9	57.2	20	28	36.4	53	20.8	.....	2.30	17	6	7	8	N
Wileyton.....	52.2	81	9	62.6	25	22	41.8	56	20.8	.....	3.62	11	4	15	5	N
Weldon.....	51.1	80	9	61.0	28	21	41.2	52	19.8	.....	2.61	11	9	10	9	N
Wilmington.....	56.0	80	10	63.7	31	21	48.2	49	15.5	85	3.38	11	8	11	13	NE

**State Meteorological Summary for November, 1895.**

Mean barometer 30.19 inches; normal for Nov. 30.13. Highest barometer 30.63 on the 28th at Raleigh. Lowest barometer 29.48 on the 20th at Kitty Hawk. Mean temperature 50.8 degrees; normal for Nov., 49.7. Highest temperature 84 on the 10th at Newbern. Lowest temperature 15 on the 27th at Highlands, on 28th at Linville. Average rainfall 3.15 inches; normal for November 3.40 inches. Greatest monthly rainfall 7.78 inches at Hatteras; least monthly rainfall 1.24 inches at Morganton. Average number of clear days 12; partly cloudy 8; cloudy 10; rainy 7. Prevailing wind direction Northeast. Average velocity 9.2 miles per hour. Normal direction for November Northeast; normal velocity 7.6 miles per hour.







# BULLETIN

OF THE

## NORTH CAROLINA BOARD OF HEALTH.

*Published Monthly at the Office of the Secretary of the Board, at Raleigh, N. C.*

GEO. G. THOMAS, M. D., <i>Pres.</i> ,.....	Wilmington.	W. P. BEALL, M. D.,.....	Greensboro.
S. WESTRAY BATTLE, M. D.,.....	Asheville.	W. J. LUMSDEN, M. D.,.....	Elizabeth City.
W. H. HARRELL, M. D.,.....	Williamston.	PROF. F. P. VENABLE,.....	Chapel Hill.
JOHN WHITEHEAD, M. D.,.....	Salisbury.	J. C. CHASE, CIV. ENG.,.....	Wilmington.
RICHARD H. LEWIS, M. D., <i>Secretary and Treasurer</i> , Raleigh.			

VOL. X.

JANUARY, 1896.

No. 10.

### How We Catch Cold and the Best Means of Preventing It.

DR. S. WESTRAY BATTLE, OF ASHEVILLE, N. C.

(Read Before Washington Health Conference.)

What we commonly know as a cold is scientifically and properly a catarrh, from the Greek word Katarreo, I flow down; and a cold in the head is scientifically a coryza, but by whatever name it may be called, its main feature is acute inflammation beginning in the upper respiratory tract, and commonly begins with a feeling of chilliness, hence the common name of cold, which may be or may not be attributable to external causes. Sometimes the sense of chilliness is absent, there being only a sense of languor and indisposition. Not infrequently there is no sensation of any unusual kind until a feeling of stuffiness is experienced in the nostrils, or severe headache, and hoarseness, or cough, or oppression of the breathing. This

affection is also frequently ushered in by sneezing. The usual course of cold attacks the nostrils first, and afterwards the air passages leading to the chest, when it commonly takes the name of bronchial catarrh or bronchitis. If it habitually attacks the chest without running through its ordinary course, as above indicated, there is often some special cause of delicacy or weakness about the lungs, and such persons should see to it that this tendency is eradicated by observing some of the measures to which I shall call your attention, else a chronic inflammation of the lungs or consumption, results, the direst malady which we have to contend with at the present day—the scourge of modern civilization.

Colds are most common in temperate latitudes, especially in changeable, moist climates and the winter months. Perhaps this fact, in a great measure, accounts for the prevalence of tuberculosis or consumption in temperate, moist climates, which prevalency also

may be accounted for by the now well established communicability of consumption through the medium of the bacillus tuberculosis, the name by which we know the germ of this disease, and about which I endeavored to make you acquainted some months ago in Salisbury, to the end that we might lessen the frequency of this disease by exercising the proper precautions in our daily life and association with one another. So then we have noted the fact that this affection, common cold, usually begins in the nostrils. The discharge is usually at first watery, becoming afterwards more abundant and glairy, and frequently of a yellow color. There is usually more or less irritation of the surfaces affected, and probably no one of the little miseries of life is more prostrating and discouraging than a bad cold in the head.

Experiments intending to prove the contagiousness of common cold have resulted negatively, though we do have epidemic influenza, the results of which, in the form of tuberculosis, nervous prostration and almost numberless complications are very much in evidence to-day, though we are now enjoying a lull in this distressing and dangerous affection. There is no danger of mistaking the diagnosis of this affection, and it can only be doubtful when the attack is the forerunner of some acute specific disease as measles or the early stages of hay fever. Mentioning hay fever reminds me that perhaps it may not convey to your mind just what I mean, and I don't know that anybody ever conveyed to my mind, satisfactorily, just what hay fever is, but it is a sort of autumnal catarrh very like an ordinary cold. It is supposed to be caused by pollen from some of our Fall wild flowering

plants, more especially the rag-weed, but goldenrod and a number of other plants come in for their share of responsibility. Even the rose, which by any other name would smell as sweet, is a rank poison to some of these hay fever sufferers; so common in fact in some parts of the country, to give the name of rose cold to the trouble.

Ladies and gentlemen don't neglect your colds, your own or your children's. Simply because colds get well or have the tendency to do so in the healthy, does not relieve us of the responsibility of preventing such attacks or doing everything in our power to shorten and prevent the complications which sooner or later will manifest themselves if we take not warning.

Let us briefly take up the homely methods of treating a cold before we discuss preventive measures, though I may be justly accused of putting the cart before the horse; yet to fully appreciate the essence of the thing we must first have it, then forewarned we should gird up our loins and be forearmed ever afterwards. So we may divide treatment of colds into abortive and preventive measures.

The ordinary duration of a cold being more or less indefinite, our main effort should be to render the attack as short as possible, bring about a reaction and equalize the circulation which has been upset by this peculiar process which has affected the delicate system of nerves presiding over the caliber of the blood vessels. Confinement to the house and usually to the bed, is usually the first step for a day or two, and nothing is better in the very beginning than a warm bath, even a hot foot bath will usually suffice to remove the chill, and then a laxative and light diet will, more often than not, break the

cold attack in forty-eight hours. The ancient maxim to starve a fever and feed a cold, in these days of progressive medicine, does not carry with it the same force that it did in days of yore. If the exposure has been unusual and the attack ushered in with great discomfort, I know nothing better than a cup of hot water to which has been added a teaspoonful of paregoric (for a grown person) to be repeated in a couple of hours; or hot whiskey or brandy, should the paregoric be objectionable, under ordinary circumstances would be followed by marked relief. In case of children the most speedy relief is the family physician, and just here I will emphasize the fact, that a stitch in time should be the watchword.

The prevention of recurring attacks of sickness is one of the most important problems for treatment and calls for our most careful consideration. General measures for such prevention may be discussed under the heads of Exercise, Bathing, Clothing and Local Surroundings.

Vigorous and properly directed "training" is an exceedingly valuable means in controlling the catarrhal tendency, and in fairly healthy young subjects, should always be advised. Walking, gymnastics and horseback riding are capital exercises. Wheeling, with correct posture, though exercising a limited set of muscles, may be followed and give excellent results when combined with suitable indoor exercise for the arms, back and chest. Light gymnastics may be carried out by those not sufficiently vigorous to take the heavier forms of exercise. You will be surprised and delighted with results of such exercise properly carried out, oftentimes when local

measures had been tried to no purpose. So much for exercise.

Regular and frequent bathing combined with daily cold sponging of the face, neck and chest is decidedly beneficial in preventing colds, but a certain amount of precaution is always in order in the technique of the bath. Some constitutions will not brook a cold plunge under any circumstances, and in weak and catarrhal subjects such a procedure may be hurtful or the reverse of good, and during the winter months, especially, should be avoided. In such cases better energetic friction either with plain rough, or salted towel should follow the bath, which should be as cold as the individual's nervous constitution will permit. Friction should be continued until the skin is decidedly reddened.

Patients with well marked catarrhal tendencies should wear woolen underclothing of sufficient weight during all seasons; garments of three degrees of thickness being required. The heavier weights should be put on with every marked fall of temperature whatever the season. Underclothing of such persons, which has become damp from perspiration, should be changed as soon as possible, even if several times a day. Warm woolen garments also should be worn at night, a point very much neglected but very important; and in no case should clothes worn during the day be retained during the night. Woolen stockings should also be worn in the winter months.

Let us review some of the sanitary advantages claimed for woolen garments next to the skin.

1st. "Wool gently stimulates the skin;" *i. e.* to that degree necessary to excite and maintain its normal

activity in secreting and extruding the waste matter, and surplus fat and water of the body.

2nd. Wool, relative to linen and cotton, is a non-conductor of heat and electricity, and, therefore, tends to preserve to the animal body its normal measure of these vital energies.

3rd. Wool, properly woven and made up by reason of its permeability to moisture (the vaporous exhalation of the skin) promotes the elimination of the effete matters, and the reduction of the abnormal or excessive heat of the animal body; and this is the reason why *the body, even when freely perspiring, remains dry in woolen clothing*, while in linen or cotton it becomes wet—a fact of common experience with all who engage in athletic exercises.

4th. Wool thus co-operates with the skin to regulate, by its exhalations, the temperature of the body, the wool supplementing the efforts of the skin to dispose of excess of heat, whether proceeding from internal or external sources, thus maintaining that equable state which is the true condition of health and comfort. Hence it is that wool is better than linen or cotton as a preventive of the overheating of the blood through internal heat; and that woolen clothing is less oppressively hot than linen or cotton in summer, and therefore more agreeable and healthful in the hottest climates.

5th. Wool is electrical, while linen and cotton are not; *i. e.* wool generates electricity but does not conduct it. It follows, therefore, that a body clothed in wool loses less of its animal electricity, while fresh electricity is produced on the surface. Most people are familiar with the facility with which the human body conducts electricity. Cotton ranks next to it as a

conductor, while wool is classed with non-conductors and insulators, and for that reason is called an electric or generator of electricity. When the air is clear and dry, place a person upon a stool or chair, the legs of which are supported from the floor by glass tumbler, and beat him gently on the back with a woolen or camel hair shawl and sparks may be drawn from his nose or fingers from one fourth to three-fourths of an inch long—or large enough to light the gas of a burner or charge a Leyden jar. Probably every one has seen and heard electric sparks on withdrawing a woolen stocking—never from taking off a cotton one. There is no manifest electricity in the latter case, because the cotton fibre conducts it away—dissipates it.

Woolen clothing is, therefore, salutary for those whose bodies are deficient in animal heat or electricity. With persons leading sedentary lives the action of the skin is deficient and it requires the stimulating aid of the woolen clothing, which materially assists in eliminating from the tissues the excess of water and fatty matter always tending to accumulate when insufficient exercise is taken.

Chills caused by draughts or colds, damp clothes or bedding, are very dangerous, because the sudden suppression of the cutaneous exudations interferes with the circulation of the blood, thus disturbing the action of the lungs, the liver, the stomach, etc., and setting up conditions favorable to inflammation.

Their *modus operandi* may be summarized as follows:

The exhalations which are “mal-odorous” and noxious by reason of defective excretory action, are generated in the body during and after the digestion of food, during all vital

action in fact, or when the body is invaded by the disease or the mind is at work or disturbed by worry, gloom, anger or fear, or indeed by any violent passion or strong emotion. For every act of mind or body is attended with destruction of tissue, constituting so much waste matter, which becomes poisonous and potent for mischief, if not duly eliminated from the body. This elimination it is the function of the skin, in an eminent degree to do. The sudorific or sweat glands and their ducts are charged with this important office. There are about 7,000,000 of these little scavengers opening at the surface of the skin of an average-sized man, throwing off the surface from 28 to 32 ounces of refuse matter every 24 hours. The action of even a small portion of them cannot be suspended without disturbance and danger.

The body not only gives off its exhalations to the surrounding air, but it also communicates them to all objects with which it and its atmosphere come in contact.

Metallic substances, glass and wood, of which the pores are closed by paint, varnish, etc., are practically impervious to the exhalations, while the two classes of material next mentioned absorb them, but in a very different degree.

I. All vegetable fibres, such as linen, cotton, hemp, jute, paper, unvarnished and unpainted wood, silk, attract and absorb these noxious, self poisoning exhalations, and become, when in contact with beings, gradually offensive and even poisonous in their effect. Clothing (including linings and padding) and bedding made from such fibres, are agreeable and wholesome only when quite new and just washed,

but soon become saturated with the noxious exhalations, producing discomfort, and, if wet, when the vapors are set free, becoming especially dangerous.

II. All kinds of animal wool and hair, feathers and horn readily absorb all the excretions of the skin, but they do not retain them, but transmit and disperse them at their outer surfaces by a repulsive energy to which the self-cleansing properties of hair and wool fabrics are properly due. The value of this feature is hardly to be exaggerated.

Stout-soled shoes should be worn in all weather, and the feet should be encased in overshoes on wet days, as damp feet are always a serious menace to persons of catarrhal tendency.

In regard to the local preventive measures to protect those of catarrhal tendency, or who catch cold easily, much may be said.

Bad air of all sorts acts as a direct irritant, and air laden with minute fragments of any hard substance, such as stone, coal or steel and dust, is injurious, and while not causing, scientifically speaking, colds, frequently sets up inflammation in the mucous membranes, tantamount to this condition, and keeps the mucous membranes tender and sensitive. Breathing such air, of course, should be avoided, and persons whose occupation compels them to breathe such an atmosphere should wear a respirator, or a flat, dampened sponge, over the mouth and nostrils while exposed.

So, in a paradoxical manner, Mr. Chairman, I seem to have told you how we catch cold by telling you how to avoid it.

Summary of Reports from County Superintendents of Health, for December, 1895 (eighty counties reporting).

In the blanks on which these reports are made the following items are called for:

1. The number of cases of small pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.

2. The diseases which have been prevalent in the county and in what parts.

3. Epidemics among domestic animals.

4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction, and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. Measles and typhoid fever to some extent.

ALEXANDER—Dr. T. F. Stevenson, Taylorsville. No diseases to report. A new jail and court-house are needed.

ALEGHANY—Dr. Robt. Thompson, Sparta. One case of typhoid fever. Pneumonia, pleurisy and rheumatism in middle and southern parts.

ANSON—No report.

ASHE—Dr. L. C. Gentry, Crumpler. Five cases of typhoid fever and some influenza in the northern parts. A slight epidemic of hog cholera.

BEAUFORT—Dr. Joshua Tayloe, Washington. One case of hemorrhagic malarial fever. Pneumonia in many parts.

BERTIE—Dr. H. V. Dunstan, Windsor. Bronchitis and a few cases of pneumonia. Remarkably healthy.

BLADEN—Dr. Newton Robinson, Elizabethtown. No diseases to report.

BRUNSWICK—Dr. D. I. Watson, Southport. No diseases to report. The county home is in great need of repairs. The County Commissioners have been contemplating removing it nearer to the county seat, but nothing has been done as yet.

BURKE—Dr. J. L. Laxton, Morganton. Forty cases of measles, mostly in town, and almost confined to children. A new jail is needed.

BUNCOMBE—Dr. E. C. Starnes, Asheville. Measles almost epidemic. One case of diphtheria and a few of typhoid fever. The convicts all have new clothes for the winter.

CABARRUS—Dr. Robert S. Young, Concord. Thirty one cases of measles and fourteen of typhoid fever, in all parts.

CALDWELL—Dr. A. A. Kent, Lenoir. Two cases of measles and two of diphtheria.

CAMDEN—No Board of Health.

CARTERET—Dr. George N. Ennett, Beaufort. Four cases of scarlatina, one of typhoid fever and one of hemorrhagic malarial fever. Scarlatina has about subsided. Owing to the crowded condition of the jail, I have recommended the fitting up of another cell.

CASWELL—Dr. W. O. Spencer, Yanceyville. Two cases of scarlatina and one of diphtheria, both of mild form. Cholera in fowls.

CATAWBA—Dr. J. M. McCorkle, Newton. No report.

CHATHAM—Dr. L. A. Hanks, Pittsboro. Eight cases of typhoid fever. Bronchial affections.

(Since the above report was received the sad news of the death of Dr. Hanks has come to us.)

CHEROKEE—Dr. J. F. Abernathy, Murphy. No diseases to report. The court house has been destroyed by fire.

CHOWAN — Dr. R. H. Winborne, Rockyhook. Two cases of diphtheria and one of typhoid fever. Some neglected cases of malarial fever in all parts. A few cases of hog cholera. Unusually healthy. The rooms at the county home have been made much more comfortable by ceiling.

CLAY—Dr. W. E. Sanderson, Hayesville. Very little sickness. A few colds and some influenza.

CLEVELAND—Dr. O. P. Gardner, Shelby. Measles and whooping cough in all parts. Efforts are being made to make the jail more comfortable in cold weather.

COLUMBUS—Dr. I. Jackson, Whiteville. Several cases of typhoid fever. Hog cholera.

Craven—Dr. J. W. Duguid, Newbern. No report.

CUMBERLAND—Dr. W. C. McDuffie, Fayetteville. No diseases to report. The jail is in an unsatisfactory condition, and an effort is being made to build a new one.

CURRITUCK—No Board of Health.

DARE—Dr. W. B. Fearing, Manteo. Three cases of scarlatina and one of typhoid fever. Very healthy.

DAVIE—Dr. James McGuire, Mocksville. Very little sickness.

DAVIDSON—No report.

DUPLIN—Dr. J. C. Grady, Magnolia. Pneumonia.

DURHAM—Dr. J. M. Manning, Durham. One case of whooping cough. Influenza, malarial and catarrhal fevers in nearly all parts.

EDGECOMBE—Dr. Donald Williams, Tarboro. Three cases of typhoid fever. Very little sickness.

FORSYTH — Dr. E. F. Strickland, Bethania. Pneumonia in some and influenza in many parts.

FRANKLIN—Dr. E. S. Foster, Louisburg. No diseases of importance.

GASTON—Dr. J. H. Jenkins, Dallas. Measles, pneumonia and catarrhal fever.

GATES—Dr. I. W. Costen, Gatesville. No report.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. La grippe in many parts.

GREENE—Dr. Joseph E. Grimsley, Snow Hill. One case of scarlatina and two of typhoid fever. Pneumonia and la grippe in some parts. An epidemic of hog cholera in northern and eastern parts.

GUILFORD—Dr. W. J. Richardson, Greensboro. Six cases of measles and three of typhoid fever.

HALIFAX—Dr. I. E. Green, Weldon. Bronchial and pulmonary troubles to some extent.

HARNETT—Reporter, Dr. J. F. McKay, Dickinson. A few cases of bronchitis and pneumonia. Catarrhal fever in nearly all parts.

HAYWOOD—Dr. J. Howell Way, Waynesville. Three cases of typhoid fever. Measles very prevalent in Beaver Dam and Clyde townships. Whooping cough in Beaver Dam. Several cases of pneumonia and many of mild bronchial catarrhs in all sections. The

condition of the jail and its general management are all that could be desired from the strictest sanitary view.

HENDERSON—Dr. J. L. Egerton, Hendersonville. No report.

HERTFORD—Dr. John W. Tayloe, Union. Three cases of hemorrhagic malarial fever. Very little sickness.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. Five cases of measles and two of whooping cough. Pneumonia and grip in all parts heard from. An epidemic of chicken cholera.

JACKSON—Dr. W. F. Tompkins, Webster. One case of measles, two of whooping cough and two of typhoid fever. Hog cholera.

JOHNSTON—Dr. L. L. Sasser, Smithfield. Catarrhal troubles. Hog cholera. Two young horses have died with pneumonia. I have furnished blanks on postal cards to the physicians of the county at my own expense, and still they will not report—only one reply this month.

JONES—Dr. R. A. Whitaker, Trenton. No report.

LENOIR—Dr. James K. Parrott, Kinston. Two cases of typhoid fever. Acute bronchitis and coryza in all parts. Hog cholera in the east. The sanitary condition of town and country is improving, in consequence of attention to drainage. The jail is being renovated, old bedding burned, and its ventilation greatly improved. A sewer pipe is needed, but the jailer, Mr. Braxton, takes a good deal of interest in the matter and keeps it well cleaned, under the circumstances.

LINCOLN—Dr. Thos. F. Costner, Lincolnton. One case of diphtheria. Measles, in different parts, fifteen cases.

MCDOWELL—Dr. Geo. R. White, Marion. No report.

MACON—Dr. S. H. Lyle, Franklin. Fifteen cases of measles, three of whooping cough and four of typhoid fever.

MADISON—Dr. Jas. K. Hardwicke, Marshall. Six cases of typhoid fever. Influenza in some parts.

MARTIN—Dr. W. H. Harrell, Williamston. One case of typhoid fever. The sanitary condition of the county is the best I have ever known it.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. Measles epidemic. A few cases of whooping cough.

MITCHELL—Dr. C. E. Smith, Bakersville. Four cases of typhoid fever. An epidemic of mumps in the west. The sanitary condition of the jail is as good as possible, for such a structure. We have been needing a new jail for some years, but our Board of County Commissioners say the county is so far in debt now that they cannot afford to build one, and I agree with them.

MONTGOMERY—Dr. W. A. Simmons, Troy. One case of typhoid fever. Remarkably healthy.

MOORE—Dr. Gilbert McLeod, Carthage. Three cases of measles. Some bronchitis and influenza. An epidemic of hog cholera. The County Commissioners have the matter of new cells and other improvements in the jail under consideration.

NASH—Dr. J. J. Mann, Nashville. Very little sickness.

NEW HANOVER—Dr. J. C. Shepard, Wilmington. One case of measles, seven of scarlatina and three of typhoid fever. Catarrhal and malarial fevers in all parts.

NORTHAMPTON—Dr. H. W. Lewis,



JACKSON. One case of scarlatina and three of hemorrhagic malarial fever. Influenza in some parts.

ONSLow—Dr. E. L. Cox, Jacksonville. Some malarial fever and pneumonia.

ORANGE—Dr. D. C. Parris, Hillsboro. Mumps and catarrhal fever in all parts.

PAMLICO—No Board of Health.

PASQUOTANK—Dr. J. E. Wood, Elizabeth City. Four cases of typhoid fever. Some dysentery. Catarrhal fever in all parts. Minor improvements at the county home.

PENDER—Dr. Geo. F. Lucas, Currie. Slight bronchial troubles in all parts.

PERQUIMANS—Dr. John F. Speight, Hertford. Bronchitis and pneumonia.

PERSON—Dr. R. A. Morton, of Roxboro, recently elected superintendent, is dead.

PITT—Dr. Frank W. Brown, Greenville. No sickness of any kind scarcely.

POLK—Dr. C. J. Kenworthy, Tryon. One case of typhoid fever. Minor repairs at the jail are needed.

RANDOLPH—Dr. T. T. Ferree, Ashboro. Twenty-five or thirty cases of typhoid fever and eight or ten of typhomalarial fever in various parts. The public institutions are well kept.

RICHMOND—Dr. W. H. Steele, Rockingham. A few cases of measles, whooping cough, pneumonia and influenza.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. Whooping cough. An epidemic of hog cholera. Minor repairs needed at the jail.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. Three cases of whooping cough and three of typhoid fever.

ROWAN—Dr. John Whitehead, Salisbury. Four cases of measles, three of

whooping cough and two of typhoid fever.

RUTHERFORD—Dr. E. B. Harris, Rutherfordton. Measles, twenty cases; whooping cough, 15; scarlatina, 10; typhoid fever, 5; the first three widely distributed. All are diminishing in number.

SAMPSON—Dr. Jno. A. Stevens, Clinton. A few cases of whooping cough and bronchitis. An epidemic of hog cholera. Little sickness.

STANLY—Dr. J. N. Anderson, Albemarle. One case of typhoid fever. Some bronchitis, influenza and pneumonia.

STOKES—Dr. W. L. McCannless, Danbury. Three cases of typhoid fever. Pneumonia in most parts.

SURRY—Dr. John R. Woltz, Dobson. Two cases of diphtheria. La grippe in all parts.

SWAIN—Dr. A. M. Bennett, Bryson City. Four cases of measles. Influenza.

TRANSYLVANIA—Dr. M. M. King, Brevard. Twenty-five cases of measles and one of typhoid fever.

TYRRELL—No report.

UNION—Dr. J. E. Ashcraft, Monroe. Measles and whooping cough epidemic. Two cases of diphtheria and six of typhoid fever. Catarrhal fever in town and country.

VANCE—Dr. J. H. Tucker, Henderson. One case of scarlatina and a few cases of whooping cough, catarrhal disorders and pneumonia, in many parts.

WAKE—Dr. P. E. Hines, Raleigh. One case of measles, two of typhoid fever and one of varicella. Bronchitis, influenza and pneumonia in all parts. There have been more cases of pneumonia in and around Raleigh during

the month than I have known for twenty-three years.

WARREN—Dr. Geo. A. Foote, Warrenton. Only mild influenza in some parts.

WASHINGTON—No Board of Health.

WATAUGA—Dr. W. B. Councill, Boone. No sickness of note. A few mild cases of la grippe.

WAYNE—Dr. W. J. Jones, Jr., Goldsboro. Five cases of scarlatina. Catarrhal troubles in all parts. An epidemic of hog cholera.

WILKES—Dr. J. M. Turner, Wilkesboro. Two cases of diphtheria and four of typhoid fever. Catarrhal fever and whooping cough.

WILSON—Dr. Albert Anderson, Wilson. No diseases to report. Cholera in hogs in a few places.

YADKIN—Dr. T. R. Harding, Yadkinville. A few mild cases of diphtheria and typhoid fever.

YANCEY—Dr. J. L. Ray, Burnsville. Whooping cough and measles in some parts. Some typhoid fever heard of. Some improvements are being made at the county home for the winter.

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Review of Diseases Reported for December,  
1895.

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BRONCHITIS—From Harnett, Haywood, Lenoir, Moore, Pender, Perquimans, Sampson, Stanly and Wake—9 counties.

CHOLERA IN FOWLS—From Iredell.

CHOLERA IN HOGS—From Ashe, Chatham, Columbus, Greene, Jackson, Johnston, Lenoir, Moore, Robeson, Sampson, Wayne and Wilson—12 counties.

DIPHThERIA—From Buncombe, Caldwell, Caswell, Chowan, Lincoln,

Surry, Union, Wilkes, and Yadkin—9 counties.

DYSENTERY—From Pasquotank.

INFLUENZA—From Ashe, Clay, Durham, Granville, Greene, Iredell, Madison, Moore, Northampton, Richmond, Stanly, Surry, Swain, Wake, Warren and Watauga—16 counties.

MALARIAL FEVER—From Beaufort, Carteret, Chowan, Durham, Hertford, New Hanover, Northampton, Onslow and Randolph—9 counties.

MALARIAL FEVER, HEMORRHAGIC—From Beaufort, Carteret, Hertford and Northampton—4 counties.

MEASLES—From Alamance, Buncombe, Burke, Cabarrus, Caldwell, Cleveland, Guilford, Haywood, Iredell, Jackson, Lincoln, Macon, Mecklenburg, Moore, New Hanover, Richmond, Rowan, Rutherford, Swain, Transylvania, Union, Wake and Yancey—23 counties.

MUMPS—From Mitchell and Orange.

PLEURISY—From Alleghany.

PNEUMONIA—From Alleghany, Beaufort, Bertie, Duplin, Gaston, Greene, Harnett, Haywood, Onslow, Perquimans, Richmond, Stanly, Stokes, Vance, and Wake—15 counties.

PNEUMONIA IN HORSES—From Johnston.

RHEUMATISM—From Alleghany.

SCARLATINA—From Carteret, Caswell, Dare, Greene, New Hanover, Northampton, Rutherford, Vance and Wayne—9 counties.

TYPHOID FEVER—From Alamance, Alleghany, Ashe, Cabarrus, Carteret, Chatham, Chowan, Columbus, Dare, Edgecombe, Greene, Guilford, Haywood, Jackson, Lenoir, Macon, Madison, Martin, Mitchell, Montgomery, New Hanover, Pasquotank, Polk, Ran-

dolph, Rockingham, Rowan, Rutherford, Stanly, Stokes, Transylvania, Union, Wake, Wilkes, Yadkin and Yancey—35 counties.

TYPHO-MALARIAL FEVER — From Randolph.

VARICELLA—From Wake.

WHOOPING COUGH — From Buncombe, Cleveland, Durham, Haywood, Iredell, Jackson, Macon, Richmond, Robeson, Rockingham, Rowan, Rutherford, Sampson, Union, Vance, Wilkes and Yancey—17 counties.

Summary of Mortuary Reports for Dec., 1895.  
(Twenty-six towns.)

	White.	Col'd.	Total.
Aggregate population.....	87,272	61,913	149,185
Aggregate deaths.....	81	107	188
Representing annual death rate per 1000.....	11.1	20.7	15.1
<i>Causes of Death.</i>			
Typhoid fever.....	2	3	5
Malarial fever.....	0	4	4
Diphtheria.....	0	1	1
Whooping Cough.....	0	1	1
Measles.....	1	6	7
Pneumonia.....	9	15	24
Consumption.....	9	15	24
Brain diseases.....	12	2	14
Heart diseases.....	10	9	19
Neurotic diseases.....	1	3	4
Diarrhoeal diseases.....	7	2	9
All other diseases.....	24	44	68
Accident.....	4	2	6
Suicide.....	2	0	2
	81	107	188
Deaths under 5 years.....	16	37	53
Still-born.....	5	8	13

\*Cholera-Infantum, Cholera-Morbus, and Dysentery, when mentioned by reporters, are given separate headings.

## Condition of Jails and County Homes by Counties for December, 1895.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination. Number who can read and write.		General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination. Number who can read and write.	
Alamance...	good	23 (a)				good	40			
Alexander .	no change	1		0		no change	7		0	3
Alleghany...		1					7			
Anson .....										
Ashe .....	well kept	4	625			well kept	10	580		2
Beaufort ....	good	26				good	14			
Bertie .....	good	10 (b)		1	4	good	17		1	2
Bladen .....	fair	1				fair	8			
Brunswick .	no change	3	*	0	2	no change	12	900	0	0
Buncombe .	very good†	80 (c)	*	16	26	good	37	*	23	13
Burke.....	no change	10		6	8	very good	14		9	6
Cabarrus ....	good	24 (d)	*	3	3	good	26	962	7	6
Caldwell....	bad	6	*	0	4	good	2	*	1	1
Camden .....										
Carteret .....	†	5	357	2	4		0			
Caswell .....		6 (e)					24			
Catawba .....										
Chatham ....	good	27 (f)	*	6	16	good	26	*	10	11
Cherokee ....	good	6				good	4			
Chowan .....	well kept	10			0	well kept†	6		2	0
Clay.....	good	2					0			
Cleveland ...	†	17	1,000		12		23	900		4
Columbus ...	good	3	*			good	11	*		
Craven .....										
Cumberland	not good †	24	500 600	6	20	good	19	1,000	8	12
Currituck .										
Dare.....	very good	1					0			
Davidson.....										
Davie .....	not good	2		1	2	fair	11		2	0
Duplin.....		2	600		2		12	450	1	1
Durham .....	good	40 (g)				good	21	*		
Edgecombe	fair	14	*	1	2	fair	23	*	2	3
Forsyth.....	good	10	1,000	4	5	good	28	*	8	7

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 15 in House of Correction. (b) Includes 9 in House of Correction. (c) Includes 64 in House of Correction. (d) Includes 14 in House of Correction. (e) Includes 4 in House of Correction. (f) Includes 10 in House of Correction. (g) Includes 18 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin .....	no change	2	*	.....	.....	no change	28	450	.....	.....
Gaston .....	well kept	.....	.....	.....	.....	well kept	.....	.....	.....	.....
Gates .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Graham .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Granville.....	good	15	600	4	6	good	33	600	2	4
Greene .....	.....	0.	.....	.....	.....	very good	7	.....	3	2
Guilford .....	very bad	58 (a)	.....	.....	.....	good	36	.....	.....	.....
Halifax.....	good	7	.....	2	3	good	39	.....	4	5
Harnett .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haywood .....	very good†	19	400	0	11	.....	7	.....	0	.....
Henderson .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hertford .....	.....	3	*	0	0	.....	6	*	0	0
Hyde .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iredell .....	no change	29 (b)	.....	.....	.....	no change	21	.....	.....	.....
Jackson .....	.....	11	.....	.....	.....	.....	3	.....	.....	.....
Johnston .....	good	10	1,000	6	8	good	12	*	2	2
Jones .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lenoir .....	well kept†	5	.....	.....	.....	.....	0	.....	.....	.....
Lincoln.....	good	3	*	1	3	fair	25	600	12	5
McDowell.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Macon .....	no change	6	300	2	4	no change	13	600	8	9
Madison.....	.....	20	300	7	6	.....	19	400	10	7
Martin.....	good	4	*	0	2	good	15	*	5	3
Mecklenburg ..	good	102 (c)	*	.....	.....	good	60	*	.....	.....
Mitchell .....	fair†	6	.....	.....	.....	good	3	.....	.....	.....
Montgomery...	very good	2	500	.....	.....	very good	17	500	.....	.....
Moore .....	+	9	1,000	0	5	good	5	*	1	2
Nash.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hanover ..	.....	32 (d)	400	6	25	.....	24	*	20	6
Northampton ..	good	4	1,000	0	2	good	33	800	12	8
Onslow .....	very good	2	.....	.....	.....	very good	6	.....	.....	.....
Orange .....	not good	4	500	2	3	good	15	1,000	8	8
Pamlico .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 28 in House of Correction. (b) Includes 16 in House of Correction. (c) Includes 80 in House of Correction. (d) Includes 2 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number prisoners confined.	Space allotted each (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....		4	*	0	2		26	*	0	1
Pender.....	fair	1		0	0	fair	4		0	0
Perquimans.....		2					8			
Person.....										
Pitt.....	good	5	*		2	good	24	*		2
Polk.....	fair	2	*	1	1		0			
Randolph.....		10					28			
Richmond.....	good	35				good	20	*		
Robeson.....	good †	20				good	13			
Rockingham ..	good	18	600	*		good	39	400-700		
Rowan.....							23		10	7
Rutherford.....		14					16			
Sampson.....	very good	9				very good	17			
Stanly.....						good	7	*	0	1
Stokes.....	good	6	800	2	3	good	12	600	4	4
Surry.....		14 (a)	224	1	2	good	23			3
Swain.....	good	7	900	0	4		4	1,000		
Transylvania ..	good	3	*	0	3	good	5	*	0	
Tyrrell.....										
Union.....	good	10				good	18			
Vance.....	fair	13	*	2	2	excellent	12	*	2	2
Wake.....	very good	113 (b)				very good	64			
Warren.....	good	2	1,000			good	22	1,000	2	
Washington.....										
Watauga.....	good	6				good	7			
Wayne.....	good	15 (c)			5	good	12		1	
Wilkes.....	no change	3				no change	14			
Wilson.....	good	11	*	2	5	good	34	*	8	10
Yadkin.....	good	6		0	3	good	20		0	7
Yancey.....	very good	6		0	3	no change	4			

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 1 in House of Correction. (b) Includes 69 in House of Correction. (c) Includes 5 in House of Correction.

Mortuary Report for December, 1895.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Nervous Diseases.	Diarrhoeal Diseases.	All Other Disases.	Accident.	Suicide.	Violence.	TOTAL DEATHS.			
		By Races.	Total.	By Races.	Total.																	By Races.	Total.		
Asheville..... Dr. E. C. Starnes	White. Colored.	8,000 4,000	12,000	7.5 3.0	6.0							1	2										5	6	1
<b>CHARLOTTE</b> ..... C. A. Spratt, Esq.	White. Colored.	10,855 8,730	19,651	17.7 24.6	20.7	2			1	1	6	2	1	4	3		2	1	3	3	1		16	34	8
Durham..... Dr. J. M. Manning.	White. Colored.	4,000 2,000	6,000	12.0 0.0	8.0						2								1	1			4	4	2
<b>FAYETTEVILLE</b> ..... Dr. J. V. McDougald	White. Colored.	3,000 2,000	5,000	20.0 12.0	16.8						1	1	1	1					2	1			2	5	1
<b>GOLDSBORO</b> ..... City Clerk T. H. Bain.	White. Colored.	3,700 1,700	5,400	3.5 21.2	8.9							1	1	1					1	1			1	4	
<b>GREENSBORO</b> ..... City Clerk J. S. Michaux	White. Colored.	5,500 2,500	8,000	6.5 28.8	13.5						1	1	2						1	3			3	9	1
<b>HENDERSON</b> ..... Dr. W. J. Judd.	White. Colored.	2,250 2,000	4,250	10.7 18.0	14.0	1					1								1	1			2	5	
<b>HILLSBORO</b> ..... Dr. D. C. Parris.	White. Colored.	400 200	600	0.0 0.0	0.0																		0	0	
<b>LENOIR</b> ..... Dr. A. A. Kent.	White. Colored.	800 300	1,100	30.0 40.0	32.7									1					1				2	3	
<b>MONROE</b> ..... Dr. J. M. Blair.	White. Colored.	1,800 600	2,400	0.0 20.0	5.0														1				0	1	
<b>OXFORD</b> ..... Dr. W. O. Baskerville	White. Colored.	1,600 1,400	3,000	15.0 0.0	8.0									1					1				2	2	2
<b>PITTSBORO</b> ..... Dr. L. A. Banks.	White. Colored.	350 250	600	0.0 0.0	0.0																		0	0	
<b>RALEIGH</b> ..... T. P. Sale, Clerk B. H.	White. Colored.	8,500 7,500	16,000	14.1 24.0	20.0	1					3	2	2	3	1	2	1		5				10	25	2
<b>ROCKINGHAM</b> ..... Dr. W. H. Steele.	White. Colored.	1,300 450	1,750	18.5 26.7	20.6							2	3	1									2	3	
<b>ROCKY MOUNT</b> ..... Dr. G. L. Wimberley.	White. Colored.	1,800 600	2,400	0.0 0.0	0.0																		0	0	
<b>SALEM</b> ..... C. S. Hauser II, officer	White. Colored.	3,942 312	4,284	6.1 0.0	5.6							1							1				2	2	1
<b>SALISBURY</b> ..... Dr. John Whitehead.	White. Colored.	3,500 1,500	5,000	13.7 24.0	16.8								1	1					1	1			4	7	
<b>SCOTLAND NECK</b> ..... Mayor J. A. Perry.	White. Colored.	775 425	1,200	0.0 0.0	0.0																		0	0	
Statesville..... Dr. W. J. Hill.	White. Colored.	2,500 1,000	3,500	14.4 0.0	10.3														2	1			3	3	
<b>TARBORO</b> ..... Dr. Donald Williams	White. Colored.	1,300 1,200	2,500	18.5 20.0	19.2							1	1										2	4	1
<b>WARRENTON</b> ..... Dr. Geo. A. Foote.	White. Colored.	1,000 600	1,600	0.0 0.0	0.0																		0	0	
<b>WASHINGTON</b> ..... Dr. Joshua Taylor.	White. Colored.	3,000 2,500	5,500	16.0 19.2	17.4														4				4	8	
<b>WELDON</b> ..... Mayor J. T. Gooch.	White. Colored.	700 750	1,450	0.0 16.0	8.3																		0	1	1
<b>WILMINGTON</b> ..... Dr. J. C. Shepard.	White. Colored.	9,000 13,000	22,000	12.0 24.9	19.6			3				3	2	3	3				2	3			9	36	1
<b>WILSON</b> ..... Dr. Albert Anderson	White. Colored.	2,500 1,500	4,000	9.6 40.0	24.0							1	1										2	5	3
<b>WINSTON</b> ..... Dr. John Bynum.	White. Colored.	5,200 4,800	10,000	6.9 35.0	20.4				1			3	4						1	1			3	17	1

\*The reporters for the cities and towns printed in bold faced type have signed this certificate: "I hereby certify that this report gives the whole number of deaths occurring within the corporate limits during the above month."

**METEOROLOGICAL SUMMARY FOR NORTH CAROLINA, DECEMBER, 1895.**  
 Furnished by the North Carolina Agricultural Experiment Station and State  
 Weather Service.

H. B. BATTLE, PH. D., DIRECTOR

C. F. VON HERRMAN, METEOROLOGIST.

TEMPERATURE, (DEGREES FAHR.)

NO. OF DAYS.

STATIONS.	Monthly Mean.		Mean Maximum.		Mean Minimum.		Monthly Range.	Mean Daily Range.	Mean Rel. Humidity.	Total Precipitation.	NO. OF DAYS.				Prevailing Wind.	
	Highest Date.	Lowest Date.	Highest Date.	Lowest Date.	Clear.	Partly Cloudy.					Cloudy.	Rainy.				
Asheville.....	38.4	63	24	50.4	8	6	26.3	55	21.1	81.0	3.76	6	12	13	11	W
Charlotte.....	42.4	68	25	50.6	18	6	34.1	50	16.5	71.8	3.52	11	8	12	10	NE
Chapel Hill.....	42.6	72	26	53.0	18	13	32.2	54	20.8	.....	3.63	19	5	7	9	SW
Fayetteville.....	44.3	73	26	52.9	21	11	35.9	52	17.2	.....	2.30	17	4	10	8	SW
Falkland.....	44.1	72	25	53.0	21	6	37.2	51	15.8	.....	3.46	12	15	4	5	.....
Horse Cove.....	38.5	60	23	45.4	13	4	30.6	47	15.8	.....	5.63	14	5	12	10	SE
Littleton.....	41.7	70	24	52.0	11	13	31.4	59	20.6	.....	2.46	8	7	13	11	NE
Lenoir.....	39.0	62	24	46.2	13	6	33.5	49	12.7	.....	3.85	8	10	13	7	NW
Lumberton.....	41.4	74	25	57.4	18	7	31.5	56	25.9	.....	.....	.....	.....	.....	.....	.....
Mt. Alry.....	38.4	65	24	48.2	13	6	28.1	52	20.1	.....	4.09	7	13	11	7	SW
Mt. Pleasant.....	42.5	70	25	52.9	14	6	32.4	56	20.5	.....	4.24	8	6	17	9	SW
Mocksville.....	43.1	67	24	53.0	15	6	33.2	52	19.8	.....	3.67	.....	.....	.....	9	NE
Newbern.....	47.7	76	2	58.9	22	15	36.5	54	32.4	.....	2.10	.....	.....	.....	8	.....
Oak Ridge.....	41.8	70	23	51.7	15	14	30.0	55	23.7	.....	4.82	16	9	6	13	W
Pittsboro.....	40.6	70	26	49.0	17	13	32.2	53	16.8	.....	4.10	16	5	10	5	NE
Raleigh.....	43.4	71	26	52.1	20	14	31.8	51	17.3	.....	2.62	7	9	15	8	N
Rockingham.....	45.0	73	26	56.3	18	6	33.6	55	22.7	.....	6.19	18	7	6	5	N
Roxboro.....	41.2	69	26	51.6	15	14	30.8	54	20.8	.....	2.55	12	3	16	7	.....
Soapstone Mount..	41.6	75	24	55.9	11	6	27.2	64	28.7	.....	5.49	3	19	9	7	SW
Saxon.....	38.2	67	26	49.1	10	14	27.3	57	21.8	.....	3.84	4	16	11	7	SW
Southern Pines.....	47.5	74	23	58.1	22	6	.....	52	.....	.....	3.54	22	6	3	4	NW
Salisbury.....	40.8	69	25	50.0	17	6	31.6	52	18.4	.....	3.96	.....	.....	.....	7	.....
Tarboro.....	44.0	73	24	56.5	18	6	31.5	55	25.0	.....	2.79	15	3	13	6	N
Willeyton.....	45.2	70	20	55.9	21	6	34.4	49	21.5	.....	2.28	11	6	14	4	N
Weldon.....	43.0	69	25	53.2	20	14	32.9	49	20.3	.....	2.65	11	8	12	11	SW
Wilmington.....	48.6	75	2	57.5	22	14	39.8	33	17.7	.....	1.40	14	6	11	7	NW

**State Meteorological Summary for December, 1895.**

Mean barometer 30.16 inches; normal for Dec., 30.16. Highest barometer 30.71 on the 14th at ..... Lowest barometer ..... on the 14th at ..... Mean temperature 42.4 degrees; normal for Dec., 42.7. Highest temperature 76 on the 2d at Newbern. Lowest temperature 5 on the 6th at Linville and Waynesville. Average rainfall 3.41 inches; normal for December 4.00 inches. Greatest monthly rainfall 8.94 inches at Linville; least monthly rainfall 1.03 inches at Rutherfordton. Average number of clear days 12; partly cloudy 9; cloudy 10; rainy 8. Prevailing wind direction North. Average velocity ..... miles per hour. Normal direction for December Northeast; normal velocity 7.6 miles per hour.



# BULLETIN

## OF THE

# NORTH CAROLINA BOARD OF HEALTH.

*Published Monthly at the Office of the Secretary of the Board, at Raleigh, N. C.*

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GEO. G. THOMAS, M. D., <i>Pres.</i> ,.....Wilmington.	W. P. BEALL, M. D.,.....Greensboro.
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VOL. X.

FEBRUARY, 1896.

No. 11.

### **Typhoid Fever from Impure Drinking Water at Wilmington.**

By Geo. G. Thomas, M. D., Pres. N. C. Board of Health.

On the night of the 28th of November last a number of young ladies and gentlemen attended a dance at Germania Hall in Wilmington—an impromptu gathering, which was intended as an entertainment of the members of the foot ball team which had played a match game in that city in the afternoon preceding the dance. The regular janitor of the hall was absent and a careless and ignorant man was put in his place. A half block below the entrance of hall is a dock in the river into which empties a sewer, draining the closets and waste water of eight or ten blocks. From this dock it appears probable that the water was taken, near the point of the wharf, a distance from the mouth of the sewer of about twenty feet, and where the sewerage mixes with the river stream. It is likewise asserted that there was in the cooler into which this river water was poured for use, some water that had been in this receptacle since last April.

The janitor on the occasion admits that he brought up some water from the river, but says that it was used to do washing about the hall, and he asserts that the drinking water was obtained from a driven pump in the next block, in the yard of Mr. Haar. Within a week after the dance three young ladies and one gentleman were taken sick. Two more young men sickened within the three weeks following the dance, and we give a brief summary of the cases as best we can below:

1. Miss D., aged 20, was taken sick three days after the dance, and her physician thought she had an attack of influenza. On the fifth day there were marked typhoid symptoms, notably a persistently high temperature. She had a slight diarrhoea and tympany, but there was intense headache attended at first by hebetude, later by delirium. On the thirteenth day pneumonia developed and intestinal hemorrhage occurring on the sixteenth day brought on the fatal issue.

2. Miss H., aged 19. Had an entero-

colitis beginning the day after the dance. This yielded to treatment and in a few days she was up, and attended during the week following two entertainments. About ten days after the first attack she was seized with fever, of a marked typhoid character, but promising to be mild. The fever declined rapidly and was immediately followed by a gastritis. This, in turn, was checked by rectal feeding and appropriate medication. As soon as the patient was allowed to take food by the mouth, a duodenitis was declared complicated by a swelling of the orifice of the common duct. The gall bladder was quite much enlarged, and pain and nausea with slight jaundice accompanied the complications. The subsidence of the duodenitis was comparatively quick, but the fever persisted, attended by great prostration. On the twenty-second day a general peritonitis following a period of depression, probably the shock attending a perforation, rapidly closed the life of this young lady.

3. Miss P., aged 18. Had a diarrhœa and probably some fever for the two weeks after the dance, but she was not seen by a physician until the end of that time. Diarrhœa was then slight and followed by constipation. The initial chill of the typhoid fever was probably on the fourteenth day after the dance. This case was very mild, and atypical. Temperature range was low; there were no nervous symptoms except a severe headache and backache, no tympany, and no delirium. There was a slight diarrhœa after the administration of medicine to relieve the constipation. The patient made a good recovery, the fever leaving her on the twenty-first day from the chill.

4. Mr. P., aged 20, was at home from the University for Thanksgiving day,

attended the dance, and went back to the University the next day. He was sick but not confined to his room; too unwell, however, to attend actively to his college duties. He came home for the Christmas holidays and was taken down with a fever that was like the last one reported, mild in type, but which lasted quite three weeks. He made a good recovery.

5. Mr. H's case, age not known, was very much of the same character as case 4.

6. Mr. C., aged 21, was taken sick within a few days after leaving Wilmington. He was dangerously ill for some days, but made a final recovery.

The cases are thus briefly mentioned, because they all were in general affected in the same manner.

There are only two sources from which the water supply might have come—the river at the dock, or the well at Haar's store. But there is no reason to suppose that Haar's well was infected as it is used by his household and quite a number of small stores in the neighborhood, and there has been no report of sickness from the persons using it.

We submit the report of Dr. Pate, the bacteriologist at Gibson Station, made at the request of Dr. A. H. Harriess, the superintendent of health of Wilmington. Four samples were sent Dr. Pate. 1. Water from the dock at half flood. 2. Water from Haar's well. 3. Water from the hydrant of the city water works. 4. Water that had been in the cooler in Germania hall for ten days.

Although no typhoid fever germs were found by Dr. Pate, it is to be remarked that the dock water contained large quantities of intestinal bacilli, and these may have been the cause of the fever, and probably were,

as it is now claimed and generally admitted that the common bacillus of the colon under favorable circumstances may aid in the development of the typhoid germ.

At any rate the action of the careless janitor was followed by a terrible calamity—the sacrifice of two beautiful young women, the darlings of their respective families, and endangered the lives of four other young people.

The report of Dr. Pate is quite complete and he has dealt with the water submitted to him in a most exhaustive manner.

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GIBSON STATION, N. C.

Feb. 15, 1896.

DR. GEO. GILLET THOMAS,  
PRES. STATE BOARD OF HEALTH,  
WILMINGTON, N. C.

SIR:—I have the honor to submit the following as a report of the bacteriological examination of the four samples of water collected and sent to me by Dr. A. H. Harriss, Supt. of Health for Wilmington, N. C., Feb. 3, 1896.

The examination shows that the bacteria in all of the samples are benign forms except those in the river water. No. 1 sample from pump at Harr's

store, when first plated in the usual quantities, developed only two colonies of bacteria, and I found it necessary to plate this sample again. This was done after leaving the bottle standing for five days. Then the water was thoroughly mixed by shaking the bottle, and larger quantities plated than usual with the result indicated in the table, viz: 150 bacteria to the c. c. of water. The number of bacteria in this sample is very low for pump water in city soil, and doubtless other samples from the same source would show the general average to be greater.

No. 2 sample from hydrant near Harr's store gives 5700 bacteria to the c. c. of water which would indicate an abnormal amount of germ food in the city water supply.

No. 3 sample from cooler at Germania Hall gives 9000 bacteria to the c. c. of water. This water stood in the cooler several days, and it is probable that the increase in the number of bacteria was caused by their multiplication during this time.

No. 4 sample from river contains intestinal bacillus.

Respectfully submitted,

W. T. PATE.

Table Showing Results of Bacteriologic Analyses of Four Samples of Water from Wilmington, N. C.

No	Source	Date	No. of Bacteria to 1 C. C.	Fermentation Test		Wurtz's Lactose-agar	Gelatine	Motility	Reaction		Lithmus Milk	Potato	Incol	Remarks
				Lactose	Glucose				Lactose Bouillon	Glucose Bouillon				
1	Pump at Haar's Store	Feb., 3d, 1896.	150	Does not ferment	Does not ferment		Pale Blue Colonies Does not liquify	Active	Acid.	Acid.	Not coagulated, ninth day heliothrope	White, Elevated, moist	None	
2	Hydrant near Haar's Store	do	5,700	do	do		Brown's Colonies Does not liquify	do	do	do	do	do	do	
3	Cooler at Germania Hall	do	9,000	do	do		Brown spreading colonies liquifies	do	do	do	do	Yellowish, moist, spreading.	do	
4	River	do	Immun-erable	Fer-ments	Fer-ments	Red colonies	Yellowish, spreading colonies Does not liquify	do	do	do	Coagu-lated Third day pink	Yellowish, dry	Consid-erable	Infestinal bacillus

Summary of Reports from County Superintendents of Health, for January, 1896, (eighty-one counties reporting).

In the blanks on which these reports are made the following items are called for :

1. The number of cases of small pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.

2. The diseases which have been prevalent in the county and in what parts.

3. Epidemics among domestic animals.

4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction, and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. Some cases of measles and one or two of typhoid fever.

ALEXANDER—Dr. T. F. Stevenson, Taylorsville. One case of measles and two of typhoid fever.

ALLEGHANY—Dr. Robt. Thompson, Sparta. Pneumonia, pleuritis and rheumatism.

ANSON—No report.

ASHE—Dr. L. C. Gentry, Crumpler. Influenza of mild type. Health excellent.

BEAUFORT—Dr. Joshua Tayloe, Washington. No diseases reported.

BERTIE—Dr. H. V. Dunstan, Windsor. No diseases reported. New heating arrangements for the jail have added much to the comfort of the inmates.

BLADEN—Dr. Newton Robinson, Elizabethtown. A few cases of measles. The court house is new and in fine condition. The jail is as comfortable as the building will admit.

BRUNSWICK—Dr. D. I. Watson, Southport. No diseases reported.

BUNCOMBE—Dr. E. C. Starnes, Asheville. A few cases of measles and whooping cough. An epidemic of distemper in horses. Improvements have been made in the sanitary conditions of the convict camp.

BURKE—Dr. J. L. Laxton, Morganton. Seventy-five cases of measles in nearly all parts and ten of whooping cough.

CABARRUS—Dr. Robert S. Young, Concord. Five hundred cases of measles and eight of typhoid fever. Catarrhal troubles and pneumonia in all parts.

CALDWELL—Dr. A. A. Kent, Lenoir. Two cases of typhoid fever. Measles epidemic in all parts, a few deaths from it when complicated with pneumonia.

CAMDEN—No Board of Health.

CARTERET—Dr. George N. Ennett, Beaufort. One case of scarlatina. Occasional catarrhal troubles in all parts.

CASWELL—Dr. W. O. Spencer, Yanceyville. Measles in several neighborhoods. Catarrhal fever in some.

CATAWBA—Dr. J. M. McCorkle, Newton. No report.

CHATHAM—No report.

CHEROKEE—Dr. J. F. Abernathy, Murphy. A few cases of measles and some pneumonia.

CHOWAN — Dr. R. H. Winborne, Rockyhook. One or two cases of pneumonia. Catarrhal and bronchial troubles in all parts. Sanitary condition never better.

CLAY—Dr. W. E. Sanderson, Hayesville. Measles has prevailed in one township. Hog cholera epidemic in parts.

CLEVELAND—Dr. O. P. Gardner, Shelby. Measles in a light form in all parts.

COLUMBUS—Dr. I. Jackson, Whiteville. Very little sickness. Hog cholera epidemic in certain parts.

CrAVEN—Dr. J. W. Duguid, Newbern. Two cases of scarlatina, two of diphtheria and one of typhoid fever. Influenza, pneumonia and mumps in the city have prevailed extensively. The public building going up here presents an admirable appearance. A movement is on foot to build a city hospital.

CUMBERLAND—Dr. W. C. McDuffie, acting for Dr. J. V. McGougan. No diseases reported.

CURRITUCK—No Board of Health.

DARE—Dr. W. B. Fearing, Manteo. One case of scarlatina.

DAVIDSON—Dr. John Thames, of Lexington, has been elected Superintendent of Health to succeed Dr. R. L. Payne. He reports several cases of measles and two of typhoid fever. Influenza and pneumonia in many parts.

DAVIE—Dr. James McGuire, Mocksville. Pneumonia and rubeola.

DUPLIN—Dr. J. C. Grady, Magnolia. Pneumonia and measles. Chicken cholera. The jail has been recently cleaned.

DURHAM—Dr. John M. Manning, Durham. Five cases of measles and one of

typhoid fever. Catarrhal fever, pneumonia and mumps in nearly all parts. There are four cases of pneumonia in horses, especially among animals brought on the trains.

EDGEcombe—Dr. Donald Williams, Tarboro. Whooping cough and mild catarrhal troubles in all parts.

FORSYTH — Dr. E. F. Strickland, Bethania. Measles, much acute bronchitis and coryza. More pneumonia than usual. Only two reports received from blanks sent to all the physicians in the county.

FRANKLIN—Dr. E. S. Foster, Louisburg. No sickness except severe colds and a few cases of pneumonia.

GASTON—Dr. J. H. Jenkins, Gaston. Measles in all parts followed in some cases by pneumonia with a few fatal results. Some la grippe.

GATES—Dr. I. W. Costen, Gatesville. No report.

GRAHAM—No Board of Health.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. A few cases of measles. Mumps. Mild influenza and pneumonia.

GREENE—Dr. Joseph E. Grimsley, Snow Hill. Pneumonia and influenza in all parts.

GUILFORD—Dr. W. J. Richardson, Greensboro. Ten cases of measles. Chicken cholera.

HALIFAX—Dr. I. E. Green, Weldon. Five cases of measles and one of scarlatina.

HARNETT—Reporter, Dr. J. F. McKay, of Dickinson. A few cases of measles and mumps in Dunn. Catarrhal troubles and pneumonia in all parts.

HAYWOOD — Dr. J. Howell Way, Waynesville. Measles and whooping

cough quite prevalent. Bronchial catarrhs in all parts. There cases of typhoid fever in Fines Creek township.

HENDERSON—Dr. J. L. Egerton, Hendersonville. No report.

HERTFORD—Dr. John W. Tayloe, Union. One case of typhoid fever and two of hemorrhagic malarial fever.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. Measles, whooping cough and mumps in some parts.

JACKSON—Dr. W. F. Tompkins, Webster. Eight cases of measles and five of whooping cough. Grip in some parts. Cholera in hogs and roup in chickens.

JOHNSTON—Dr. L. L. Sasser, Smithfield. One case of scarlatina and two of typhoid fever. Catarrhal, bronchial and pulmonary diseases. Some hog cholera. It is with difficulty that proper cleanliness is maintained in the jail and county home. Inmates often have no change of clothes and the authorities are slow to make expenditures for such.

JONES—Dr. R. A. Whitaker, Trenton. No report.

LENOIR—Dr. James K. Parrott, Kinston. Malarial fever and tonsilitis in all parts.

LINCOLN—Dr. Thos. F. Costner, Lincolnton. Fifty cases of measles in all parts. Some bronchitis and pneumonia.

MCDOWELL—Dr. Geo. I. White, Marion. Measles (10) and whooping cough (50 to 100). Five cases of typhoid fever.

MACON—Dr. S. H. Lyle, Franklin. Measles and whooping cough in nearly all parts. Four cases of typhoid fever.

MADISON—Dr. Jas. K. Hardwicke, Marshall. No report.

MARTIN—Dr. W. H. Harrell, Williamston. One case of typhoid fever. The jail needs better ventilation and the county home better heating facilities. I have asked the county commissioners to remedy the trouble, and they have promised to do so.

MECKLENBURG—Dr. H. M. Wilder, Charlotte. Measles still epidemic with the ordinary sequela. A few cases of mumps. The city garbage crematory is in successful operation.

MITCHELL—Dr. C. E. Smith, Bakersville. Rubeola epidemic in all parts.

MONTGOMERY—Dr. W. A. Simmons, Troy. Five cases of measles and twenty of whooping cough.

MOORE—Dr. Gilbert McLeod, Carthage. Influenza and colds in all parts. A few cases of mumps and pneumonia. The county commissioners have the needed improvements in the jail under consideration.

NASH—Dr. J. J. Mann, Nashville. Very little sickness.

NEW HANOVER—Dr. J. C. Shepard, Wilmington. Measles, 55 cases, and catarrhal diseases in all parts. Two cases of typhoid fever. Scarlatina has been stamped out by quarantine. Measles on the increase.

NORTHAMPTON—Dr. H. W. Lewis, Jackson. Eight cases of scarlatina in Seaboard township which have been quarantined. Three cases of hemorrhagic malarial fever.

ONSLow—Dr. E. L. Cox, Jacksonville. Very little sickness. A few cases of dysentery and bronchial troubles.

ORANGE—Dr. D. C. Parris, Hillsboro. Measles, three cases of scarlatina and three of typhoid fever. Cholera among fowls. The bad features in the sanitary condition of the jail are want of

proper heating, lighting, ventilation and disposal of excrement.

PAMLICO—No Board of Health.

PASQUOTANK—Dr. J. E. Wood, Elizabeth City. Two cases of scarlatina and one of typhoid fever. Catarrhal fevers and bronchitis.

PENDER—Dr. Geo. F. Lucas, Currie. Pneumonia in the western part.

PERQUIMANS—Dr. John F. Speight, Hertford. Five cases of measles.

PERSON—No report.

PITT—Dr. Frank W. Brown, Greenville. Colds and a little pneumonia.

POLK—Dr. C. J. Kenworthy, Tryon. No diseases reported. In compliance with my request, the county commissioners have called for tenders for the supply of new sash for the jail.

RANDOLPH—Dr. T. T. Ferree, Ashboro. Some catarrhal troubles. The jail has recently undergone improvements which add materially to the health and comfort of the inmates.

RICHMOND—Dr. W. H. Steele, Rockingham. Measles, whooping cough and mumps. Some cases of tonsilitis and erysipelas.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. Measles epidemic.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. No diseases to report.

ROWAN—Dr. John Whitehead, Salisbury. Measles (50), whooping cough (40) and chicken pox in all parts.

RUTHERFORD—Dr. E. B. Harris, Rutherfordton. Measles and whooping cough. A few cases of la grippe in all parts.

SAMPSON—Dr. Jno. A. Stevens, Clinton. Measles very prevalent and of a severe type. A few cases of whooping cough, influenza, bronchitis and pneumonia. Hog cholera.

STANLY—Dr. D. P. Whitly, Millingport. About fifty cases of measles. La grippe, bronchitis and pneumonia in all parts. I have had thirteen cases of pneumonia in my own practice. The new jail has been completed and is a good one.

STOKES—Dr. W. L. McCanless, Danbury. One case of typhoid fever. La grippe in all parts.

SURRY—Dr. John R. Woltz, Dobson. Measles of mild type, epidemic. Influenza and pneumonia in all parts. Two cases of putrid sore throat in one family, both fatal.

SWAIN—Dr. A. M. Bennett, Bryson City. Whooping cough. One case of typhoid fever. Influenza and pneumonia in all parts.

TRANSYLVANIA—Dr. M. M. King, Brevard. Fifteen cases of measles, ten of whooping cough and three of typhoid fever.

TYRRELL—No report.

UNION—Dr. J. E. Ashcraft, Monroe. Measles epidemic in town and country in a severe form. La grippe is epidemic. Six or eight cases of typhoid fever.

VANCE—Dr. J. H. Tucker, Henderson. One case of measles. Some whooping cough. Bad colds, bronchial catarrhs and pneumonias of mild type.

WAKE—Dr. P. E. Hines, Raleigh. Sixty-four cases of measles, three of whooping cough, one of diphtheria and nine of varicella. Bronchitis, influenza and pneumonia in all parts. A fatal epidemic among the cats in and around Cary. Hog cholera about Holly Springs.

WARREN—Dr. Geo. A. Foote, Warrenton. One case of pernicious malarial fever. Influenza in all parts.



WASHINGTON—No Board of Health.

WATAUGA—Dr. W. B. Council, Boone. Measles (100) and mumps, both of mild type, in all parts. Six cases of typhoid fever in the eastern part; all recovered.

WAYNE—Dr. W. J. Jones, Jr., Goldsboro. Four cases of whooping cough and four of scarlatina. Catarrhal troubles in all parts.

WILKES—Dr. J. M. Turner, Wilkesboro. Measles and whooping cough. Two cases of diphtheria, one of typhoid fever and many of erysipelas. Catarrhal fever.

WILSON—Dr. N. Anderson, Wilson. Two cases of hemorrhagic malarial fever. Slight catarrhal troubles in all parts.

YADKIN—Dr. T. R. Harding, Yadkinville. A few mild cases of pneumonia.

YANCEY—Dr. J. L. Ray, Burnsville. Measles and whooping cough in some parts. One case typhoid fever. The jail is in very good condition. It is kept very clean and the prisoners are kept warm and well fed. The county home is about as usual. It has been made warmer lately.

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Review of Diseases Reported for January, 1896.

BRONCHITIS—From Chowan, Forsyth, Haywood, Johnston, Lincoln, Onslow, Pasquotank, Sampson, Stanly, Vance and Wake—11 counties.

CATS—A fatal epidemic in cats, from Wake.

CHOLERA, IN CHICKENS—From Duplin, Guilford and Orange.

CHOLERA, IN HOGS—From Clay, Columbus, Jackson, Johnston and Wake.

DIPHTHERIA—From Craven, Wake and Wilkes.

DISTEMPER, IN HORSES—From Buncombe.

DYSENTERY—From Onslow.

ERYSIPELAS—From Richmond and Wilkes.

INFLUENZA—From Ashe, Craven, Davidson, Gaston, Granville, Greene, Jackson, Moore, Rutherford, Sampson, Stanly, Stokes, Surry, Swain, Union and Wake—16 counties.

MALARIAL FEVER—From Hertford, Lenoir, Northampton, Warren and Wilson—5 counties.

MALARIAL FEVER, HEMORRHAGIC—From Hertford, Northampton and Wilson.

MALARIAL FEVER, PERNICIOUS—From Warren.

MEASLES—From Alamance, Alexander, Bladen, Buncombe, Burke, Cabarrus, Caldwell, Caswell, Cherokee, Clay, Cleveland, Davidson, Davie, Duplin, Durham, Gaston, Granville, Guilford, Halifax, Harnett, Haywood, Iredell, Jackson, Lincoln, McDowell, Mecklenburg, Mitchell, Montgomery, New Hanover, Perquimans, Richmond, Robeson, Rowan, Rutherford, Sampson, Stanly, Surry, Swain, Transylvania, Union, Vance, Wake, Watauga, Wilkes and Yancey—45 counties.

MUMPS—From Craven, Durham, Granville, Harnett, Mecklenburg, Moore, Richmond and Watauga—8 counties.

PNEUMONIA—From Alleghany, Cabarrus, Caldwell, Cherokee, Chowan, Craven, Davidson, Davie, Duplin, Durham, Forsyth, Franklin, Gaston, Granville, Greene, Harnett, Lincoln, Moore, Pender, Pitt, Sampson, Stanly, Surry, Swain, Vance, Wake and Yadkin—27 counties.

PNEUMONIA IN HORSES—From Durham.

RHEUMATISM—From Alleghany.

ROUP, IN CHICKENS—From Jackson.

SCARLATINA—From Cartaret, Craven, Dare, Halifax, Johnston, New Hanover, Northampton, Orange, Pasquotank and Wayne—10 counties.

TONSILLITIS—From Richmond.

TYPHOID FEVER—From Alamance, Alexander, Cabarrus, Caldwell, Craven, Davidson, Durham, Haywood, Hertford, Johnston, Macon, Martin, New Hanover, Orange, Pasquotank, Stokes, Swain, Transylvania, Union, Watauga, Wilkes and Yancey—22 counties.

WHOOPIING COUGH—From Buncombe, Burke, Haywood, Iredell, Jackson, McDowell, Macon, Montgomery, Richmond, Rowan, Rutherford,

Sampson, Swain, Transylvania, Vance, Wake, Wayne, Wilkes and Yancey—19 counties.

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Summary of Mortuary Reports for Jan., 1896.  
(Twenty-six towns.)

	White.	Col'd.	Total.
Aggregate population.....	76,317	53,617	129,934
Aggregate deaths.....	88	84	172
Representing annual death rate per 1000.....	13.9	18.8	15.9
<i>Causes of Death.</i>			
Typhoid fever.....	2	2	4
Malarial fever.....	2	2	4
Measles.....	3	0	3
Pneumonia.....	15	14	29
Consumption.....	16	20	36
Brain diseases.....	5	1	6
Heart diseases.....	13	7	20
Neurotic diseases.....	3	2	5
Diarrhoeal diseases.....	3	2	5
All other diseases.....	23	28	51
Accident.....	3	6	9
	88	84	172
Deaths under 5 years.....	15	4	38
Still-born.....	6	8	14

## Condition of Jails and County Homes by Counties for January, 1896.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance...	good	22 (a)				good	39			
Alexander .	very good	1	1,000			very good	5	*		2
Alleghany...	fair					fair	7			
Anson .....										
Ashe .....	good	9	500		7	good	9	600		2
Beaufort ...	good	26				good	14			
Bertie. ....	very good†	8 (b)		3	2	very good	19		3	2
Bladen .....	no change	1					7			
Brunswick .	no change	2	*	0	2	no change	12	900	0	0
Buncombe .	fair†	64 (c)	*	14	38	†	37	*	18	13
Burke.....	no change	6				no change	14			
Cabarrus ...	good	22 (d)	*	2	2	good	33	*	8	10
Caldwell....		4	*	0	4		4	*	1	2
Camden .....										
Carteret.....	fair	5	800	2	5		0			
Caswell ....	fair	4 (e)				fair	22			
Catawba ...										
Chatham.....										
Cherokee....	fine	4				fine	4			
Chowan .....	good	12	*		0	good	6	*		0
Clay.....		1					0			
Cleveland ..		14			1		24	1,000		1
Columbus ...	good	1	*		0	good	12	*		0
Craven .....		11	600				26			
Cumberl'nd	bad					good				
Currituck .										
Dare.....	no change	1								
Davidson....	very good	6				very good	26			
Davie.....	not good	3		1	2	fair	10		2	0
Duplin.....	good	2	500			good	11	450	2	1
Durham .....	good	36 (f)	*			good	22	*		
Edgecombe	fair	14	*	2	3	fair	23	*	3	2
Forsyth.....	very good	36	1,000	12	15	very good	27	*	8	7

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 14 in House of Correction. (b) Includes 5 in House of Correction. (c) includes 48 in House of Correction. (d) Includes 16 in House of Correction. (e) Includes 1 in House of Correction. (f) Includes 30 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin .....	no change	1	*			very good	28	*		
Gaston .....	good					good				
Gates .....										
Graham .....										
Granville .....	very good	11	550	2	7	very good	37	600	3	4
Greene .....	good	4	600	0	4	good	7	1,000	4	4
Guilford .....	very bad	62 (a)				good	38			
Halifax .....		13	1,000	4	3		38	700	4	5
Harnett .....	fair									
Haywood .....	excellent	16				excellent	7			
Henderson .....										
Hertford .....		4	*	0	1		8	*	0	2
Hyde .....										
Iredell .....	no change	26 (b)				no change	26			
Jackson .....		5	*	1	4		4	*	0	1
Johnston .....	fair	12	1,000	4	8	fair	12	*	2	1
Jones .....										
Lenoir .....		5				0				
Lincoln .....		3	*	1	1		22	600	13	6
McDowell .....										
Macon .....	no change	3	733	0	2	no change	12	600	8	8
Madison .....										
Martin .....	†	2	*	0	0	†	16	*	5	3
Mecklenburg .....	good	89 (c)				good	61			
Mitchell .....	good	8				good	2			
Montgomery .....	good	4	500			good	17	500		
Moore .....	not good †	0				good	5	1,000	2	3
Nash .....		4					26			
New Hanover .....	good	11 (d)	400	8	3	good	26	*	20	8
Northampton .....	good	4	1,000	2	1	good	35	800	10	5
Onslow .....	good	3				good	5			
Orange .....	not good	6	500	0	6	fair	20	1,000	8	8
Pamlico .....										

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 30 in House of Correction. (b) Includes 11 in House of Correction. (c) Includes 65 in House of Correction. (d) Includes 3 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....	fair	5	*	0	4	fair	30	*	0	1
Pender.....	better	1		0	0	better	5		0	0
Perquimans.....		1					7			
Person.....										
Pitt.....	good	11	*		3	good	23	*		2
Polk.....	good	1	*	1	1		0			
Randolph.....		12	560		9		30			4
Richmond.....	fair	28	388	4	20	fair	20	850	4	13
Robeson.....	fair	13				fair	11			
Rockingham.....	good	13				good	36	500-700		
Rowan.....		21	400	5	14		22	500		
Rutherford.....	very good	16				very good	19			
Sampson.....	good	7				good	17			
Stanly.....	good+	1	*	0	1	good	9	*	0	1
Stokes.....	good	9	500	3	2	good	17	500	5	4
Surry.....	very good	14 (a)	364	1	2	very good	18	*		3
Swain.....	good	10		0	10	good	4			
Transylvania.....	good	2	*			good	5	*		
Tyrrell.....										
Union.....	good	12				good	20			
Vance.....	fair	12	*	6	5	excellent	12	*	2	2
Wake.....	good	95 (b)				good	63			
Warren.....	good	3	1,000		1	good	23	800		3
Washington.....										
Watauga.....	good	8				good	7			
Wayne.....	good	13 (c)			2	good				1
Wikkes.....	no change	8				no change	12			
Wilson.....	good	16		3	6	good	34		6	4
Yadkin.....	fair	6				good	18			
Yancey.....	very good+	5	460			better	3		0	4

\* Space exceeds 1,000 cubic feet. +See Summary of Reports from County Superintendents of Health. (a) Includes 1 in House of Correction. (b) Includes 80 in House of Correction. (c) Includes 9 in House of Correction.

## Mortuary Report for January, 1896.

TOWNS AND REPORTERS.	RACES.	POPULATION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.		Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrheal Diseases.	All Other Diseases.	Accident. Suicide.	Violence.	TOTAL DEATHS.		Deaths under 5 years.	Still Born.	
		By Races.	Total.	By Races.	Total.																By Races.	Total.			
Asheville..... Dr. E. C. Starnes	White.	8,000	12,000	21.0	17.0	1															14	3	1	3	
	Colored.	4,000		9.0																					1
Durham..... Dr. J. M. Manning.	White.	4,000	6,000	21.0	16.0	1															7	1	8	2	1
	Colored.	2,000		6.0																					
FAYETTEVILLE Dr. J. V. McGougan.	White.	3,000	5,000	8.0	14.4																2	4	6		
	Colored.	2,000		24.0																					
GOLDSBORO City Clerk T. H. Bain.	White.	3,700	5,400	3.2	6.7																2	1	3		
	Colored.	1,700		14.1																					
GREENSBORO City Clerk J. S. Michaux	White.	5,500	8,000	0.0	6.0																0	4	4	2	
	Colored.	2,500		19.2																					
HENDERSON Dr. W. J. Judd.	White.	2,250	4,250	5.3	14.1																1	5	6	1	
	Colored.	2,000		24.0																					
HILLSBORO Dr. D. C. Parris.	White.	400	600	30.0	20.0									1							1	1	2		
	Colored.	200		0.0																					
JACKSONVILLE Dr. E. L. Cox.	White.	300	400	0.0	0.0																0	0	0		
	Colored.	100		0.0																					
MARION Dr. G. I. White.	White.	700	1,000	00.0	0.0																0	0	0		
	Colored.	300		00.0																					
MONROE Dr. J. M. Blair.	White.	1,800	2,400	20.0	15.0									1							3	3	6		
	Colored.	600		0.0																					
OXFORD Dr. Wm O. Baskerville	White.	1,600	3,000	15.0	12.0																2	3	5	2	1
	Colored.	1,400		8.6																					
RALEIGH T. P. Sale, Clerk B. H.	White.	8,500	16,000	14.1	15.7								5	4	1	1	3	5			16	21	4	4	1
	Colored.	7,500		17.6																					
ROCKINGHAM Dr. W. H. Steele.	White.	1,500	1,750	27.7	27.4										1						3	4	7		
	Colored.	450		26.7																					
ROCKY MOUNT Dr. G. L. Wimberley.	White.	1,600	2,400	7.5	5.0																1	1	2		
	Colored.	800		0.0																					
SALEM C. S. Hauser H. officer	White.	3,942	4,284	12.2	14.0								1	1							4	5	9	1	1
	Colored.	312		35.0																					
Salisbury Dr. John Whitehead.	White.	3,500	5,000	12.9	16.8								1	1							3	7	10		
	Colored.	1,500		32.0																					
SCOTLAND NECK Mayor J. A. Perry.	White.	775	1,200	15.5	10.0									1							1	1	2		
	Colored.	425		0.0																					
SOUTH FORT C. C'k L. A. Galloway	White.	750	1,200	16.0	10.0								1								1	1	2		
	Colored.	450		0.0																					
Statesville Dr. W. J. Hill.	White.	2,500	3,500	0.0	0.0																0	0	0		
	Colored.	1,000		0.0																					
TARBORO Dr. Donald Williams	White.	1,300	2,500	9.2	4.8									1							1	1	2		1
	Colored.	1,200		0.0																					
WARRENTON Dr. Geo. A. Foote.	White.	1,000	1,600	0.0	7.5																0	1	1		
	Colored.	600		20.0																					
WASHINGTON Dr. Joshua Tayloe.	White.	3,000	5,500	20.0	17.4								1	1	1	1	1				5	8	13	3	1
	Colored.	2,500		14.4																					
WELDON Mayor J. T. Gooch.	White.	700	1,450	34.4	16.5			1													2	2	4	1	
	Colored.	750		0.0																					
WILMINGTON Dr. J. C. Shepard.	White.	9,000	22,000	22.7	23.4	1	1						2	5	1	2	4	1	4		17	43	60	2	1
	Colored.	13,000		24.0																					
WILSON Dr. N. Anderson.	White.	2,000	3,500	24.0	24.0								1	2	1						4	7	11	1	
	Colored.	1,500		21.0																					
WINSTON Dr. John Bynum.	White.	5,200	10,000	11.5	24.0	1							1	2							5	20	25	4	2
	Colored.	4,800		37.5																					

N. B. The reporters for the cities and towns printed in bold faced type have signed this certificate: "I hereby certify that this report gives the whole number of deaths occurring within the corporate limits during the above month."

### METEOROLOGICAL SUMMARY FOR NORTH CAROLINA, JANUARY, 1896

Furnished by the North Carolina Agricultural Experiment Station and State  
Weather Service.

H. B. BATTLE, PH. D., DIRECTOR.

C. F. VON HERRMAN, METEOROLOGIST.

STATIONS.	TEMPERATURE, (DEGREES FAHR.)										Mean Rel. Humidity.	Total Precipitation.	NO. OF DAYS.				Prevailing Wind.
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.	Mean Daily Range.	Clear.			Partly Cloudy.	Cloudy.	Rainy.		
Asheville.....	35.1	58	26	40.1	4	4	28.9	54	11.1	3.38	19	3	9	4	W		
Charlotte.....	40.1	63	30	48.1	14	5	32.1	49	16.0	2.26	13	8	10	6	E		
Chapel Hill.....	38.2	66	30	47.4	14	4	28.9	52	18.5	3.39	17	6	8	4	W		
Greensboro.....	38.4	62	30	47.2	15	5-6	29.7	47	17.5	2.16				5			
Henderson.....	38.4	67	30	47.4	12	6	29.5	55	17.9	3.75	10	9	12	9	N E		
Horse Cove.....	36.5	58	30	44.6	5	4	28.3	53	16.4	4.74	17	6	8	8	N W		
Littleton.....	37.2	60	30	46.5	10	4-5	28.0	50	18.5	3.00	8	10	12	7	N E		
Lenoir.....	36.1	56	30	43.6	11	5	28.9	45	14.7	2.32	13	10	8	5	W		
Louisburg.....	37.8	62	30	47.3	12	5	28.2	50	19.1	2.97							
Mt. Airy.....	35.8	61	30	45.8	8	5	25.7	53	20.1	1.96	8	12	11	4	S W		
Mt. Pleasant.....	39.4	65	30	49.0	13	5	29.8	52	19.2	2.06	12	3	16	3	S W		
Marion.....	38.2	70	30	50.5	9	5	26.0	61	24.5	2.25	12	9	10	4	E		
Newbern.....	43.9	68	30	54.8	11	16	33.0	57	21.8	3.55				5			
Oak Ridge.....	38.9	70	30	50.3	12	5	27.5	58	22.7	1.82	16	8	7	4			
Pittsboro.....	37.6	59	31	46.4	12	5	28.8	47	17.6	3.80	13	8	10	4	N E		
Raleigh.....	39.1	66	30	47.2	14	6	31.0	52	16.2	2.87	10	6	15	5	N		
Rockingham.....	42.9	67	30	53.7	15	5	32.1	52	21.6	1.12	16	7	8	3	W		
Roxboro.....	36.6	62	30	45.9	10	5-6	27.3	52	18.6	2.96	12	4	15	4			
Soapstone Mount... Saxon.....	37.0	65	30	50.6	7	5	23.4	58	27.2	2.57	7	17	7	5	N E		
Selma.....	36.2	56	30	45.6	6	5	26.9	50	18.7	1.92	9	12	10	5	N E		
Salisbury.....	40.3	67	31	50.3	11	7	30.3	56	20.0	2.80				3			
Tarboro.....	37.8	65	30	46.5	13	5-6	29.1	52	17.4	2.04				4			
Willenton.....	39.6	67	30	51.6	11	5-6	27.6	56	23.9	2.45	18	7	6	6	W		
Weldon.....	37.8	63	24	47.1	11	6	28.5	52	18.6		12	12	7	3	N		
Wilmington.....	38.0	59	24	46.2	12	6	30.0	48	16.2	2.61	11	12	8	6	N		
Wilmington.....	44.2	66	23	52.3	17	5	36.1	49	16.2	2.45	12	12	7	5	N E		

#### State Meteorological Summary for January, 1896.

Mean barometer 30.21 inches; normal for Jan., 30.16. Highest barometer 30.59 on the 6th at Raleigh. Lowest barometer 29.67 on the 24th at Kitty Hawk. Mean temperature 38.7 degrees; normal for Jan., 40.2. Highest temperature 70 on the 30th at Oak Ridge. Lowest temperature 2 on the 4th at Linville. Average rainfall 2.79 inches; normal for January 4.50 inches. Greatest monthly rainfall 4.74 inches at Horse Cove; least monthly rainfall 1.12 inches at Rockingham. Average number of clear days 13; partly cloudy 9; cloudy 9; rainy 5. Prevailing wind direction Northeast. Average velocity 8.5 miles per hour. Normal direction for January Southwest; normal velocity 8.5 miles per hour.





Prof J A Holmes

# BULLETIN

OF THE

# NORTH CAROLINA BOARD OF HEALTH.

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VOL. X.

MARCH, 1896.

No. 12.

## Remarks on that Part of Hygiene which Concerns the Physician.

BY DAVID T. TAYLOR, M. D.

(Read Before Washington Health Conference.)

A watchful care over the health of the people and a due regulation of matters which concern their health is certainly one of the most important functions of a physician. The fact, that, in modern times the subject of Hygiene generally and State medicine in particular, has commenced to attract so much the public attention, is undoubtedly owing to the application of statistics to public health. It is impossible for any nation or for any government to remain indifferent when in figures which admit of no denial the national amount of health and happiness, or disease and suffering, is determined. It is impossible to overrate the value of the State inquiry into the health of towns and of the country generally, which was commenced many years ago, as, in consequence of this movement,

came the appointment of Medical Officers of Health in the different towns.

The reports published by many of these gentlemen have greatly advanced the subject and have done much to diffuse a knowledge of Hygiene among the people and at the same time to extend and render precise our knowledge of the conditions of the public health. When the effect of all these researches and measures develops itself in a system of accurately recording births and deaths, it will be found to be, as far as the happiness and health of the people is concerned, one of the most important events of our times. In a comparison therefore of the deaths and diseases of one period with another, of one locality with another, of one occupation or age or condition in life with another, of one season with another, will be found the only practically useful conclusion which the Hygienist can draw from such data. Under the law of averages the limits of error and the causes of error will vary

with considerable regularity; there will always be about so many faulty diagnoses; so many intentionally false returns; so many omissions to report, so that even with admitted gross inaccuracies which can never be entirely eliminated, our present statistics properly handled, may teach practical sanitarians many useful lessons, especially as to the causes effecting the health of small districts. But the art of Hygiene has at present still another object:—If we had a perfect knowledge of the laws of life and could practically apply this knowledge in a perfect system of Hygienic rules, disease would be impossible. But at present, diseases exist in a thousand forms and the human race languishes and at times almost perishes under the grievous yoke. The study of the causes of disease is strictly a part of Physiology, but it can only be carried out by the practical physician, since an accurate identification of the disease is the first necessary step in the investigation of causes. The causes having been investigated, the art of Hygiene then comes in to form rules which may prevent their action, or render the body more fitted to bear them. Taking the word Hygiene in the largest sense, it signifies rules for perfect culture of mind and body. It is impossible to disassociate the two. The body is affected by every mental and moral action, the mind is profoundly influenced by bodily conditions; for a perfect system of Hygiene we must train the body, the intellect and moral faculties in a perfect balanced order. But is such a system possible? Is there or will there ever be such an art? Or is the belief that there will be, one of those dreams which breathe a blind hope into us, a hope born only of our longings and

destined to die of our experience? And indeed, when we look around us and consider the condition of the world, the abundance of life, its appalling waste, the wonderful contrivances of the animal kingdom, the apparent indifference with which they are trampled under foot, the gift of mind, its awful perversions and alienations, and when, especially, we note the condition of the human race and consider apparently what it might be and what it is, its marvelous endowments and lofty powers, its terrible sufferings and abasement, its capacity for happiness and its cup of sorrow, the boon of glowing health and the thousand diseases and painful deaths, he must, indeed, be gifted with sublime endurance or undying faith, who can still believe that out of this chaos order can come, or out of this suffering, happiness and health. Looking only to that part of Hygiene which concerns the physician, if a perfect system of rules of health could be arranged, the rules would commence with the regulations of the mother's health while bearing her child so that the growth of the new being should be as perfect as possible. Then after birth the rules (different for each sex at certain times) would embrace three epochs, of growth (including infancy and youth), of maturity, when for many years the body remains apparently stationary; and decay, when, without actual disease, in consequence of certain subtle changes, molecular feebleness, and death commences in some part or other, forerunning general decay and death. In these several epochs of life the human being would have to be considered first: In relation to the natural conditions which surround him and which are essential to life, such as the air he

breathes, the water he drinks, his food, the source of all bodily and mental acts, the soil which he moves on, the sun which warms and lights him, and so on. In short in relation to nature at large. Second: In his social and corporate relations, as a member of a community with certain customs, trades, conditions of dwellings, clothing, and so on. Third: In his capacity as an independent being, having within himself sources of action in thoughts, feelings, desires, personal habits, all of which affect health and which require self regulation and control. Even now, incomplete as Hygiene necessarily is, such work would, if followed, almost change the face of the world. But would it be followed?

In some cases the rules of Hygiene could not be followed, however much the individual might desire to do so. For example:—Pure air is a necessity for health, but an individual may have little control over the air which surrounds him and which he must draw into his lungs—he may be powerless to prevent other persons from contaminating his air and thereby striking at the very foundation of his health and happiness. Here as in so many other cases which demand regulation of the conduct of individuals toward each other—the State steps in for the protection of its citizens and enacts rules which shall be binding upon all—hence, arises what is now termed *State Medicine*, a matter of the greatest importance. The fact of “State Medicine” being possible marks an epoch in which some sanitary rules receive a general consent and indicates an advancing civilization.

Fear has been expressed lest State Medicine should press too much on the individual, and should too much lessen

the freedom of personal action. This however, is not likely, as long as the State acts cautiously and only on well assured scientific grounds, and as long as an unshackled press discusses with freedom every step. There are, however, some cases in which the State cannot easily interfere, though the individual may be placed under unfavorable Hygienic conditions by the action of others. For example:

In many trades the employed are subjected to danger from the carelessness or avarice or ignorance of the employers. Every year the State is, however, very properly more and more interposing and shielding the workman against the dangers which an ignorant or careless master brings on him. But in other cases the State can hardly interpose with effect and the growth of sanitary knowledge and the pressure of public opinion alone can work a cure. As for example: In the case of the dwellings of our poorer classes in many parts of the country the houses are unfit for human beings, in many of our towns, houses are put up of the most miserable structure, for which there is unhappily no lack of applicants, or masters oblige their men to work in rooms or follow plans which are most detrimental to health. But even in such cases it will be always found that self interest really indicates that the best course is to do for our neighbors as for ourselves. Analyze also the effect of such selfishness and carelessness as has been referred to on the nation at large and we shall find that the partial gain to the individual is far more than counterbalanced by the injury to the State, by the discontent, recklessness and indifference produced in the persons who suffer, and which may have a disastrous national result.

It is but too commonly forgotten that the whole nation is interested in the proper treatment of every one of its members and in its own interest has a right to see that the relations between individuals are not such as in any way to injure the well being of the community at large. In many cases again the employer of labor finds that by proper sanitary care of his men, he reaps at once an advantage in better and more zealous work, in fewer in eruptions from ill-health and so on. So that his apparent outlay is more than compensated. This is shown in the strongest light by the United States Army, where there is a large number of men whom it places under its own social and sanitary conditions, it removes from them much of the self control with regard to Hygienic rules, which other men possess, and is therefore bound by every principle of honest and fair contract to see that these men are in no way injured by its system. But more than this, it is as much bound by its self-interest. It has been proved over and over again that nothing is so costly in every way as disease, that nothing is so remunerative as the outlay which augments health, and in doing so augments the amount and value of the work done. In the work of the Sanitarian the general public is growing every day more and more interested, and more in sympathy with the movement to prevent disease and prolong human life. Whether the world is ever to see such perfection in Hygiene as we desire, no man can say. But as ages roll on hope does in some measure grow. In the midst of all our weaknesses and all our many errors we are certainly gaining knowledge, and that knowledge tells us in no doubtful

terms, that the fate of man is largely in his own hands.

It is undoubtedly true that we can choose between health or disease, not perhaps, always individually, for the sins of our fathers may be visited upon us, or the customs of our life and the chains of our civilization and social customs may gall us, or even our fellowmen may deny us health or the knowledge which leads to health. But as a race, man holds his own destiny and can choose between good and evil, and as time unrolls the scheme of the world it is not too much to hope that the choice will be for good.

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#### Dr. L. L. Sasser.

It is with unfeigned regret that we chronicle the death of the late Superintendent of Health of Johnston county. Dr. Sasser was a gentleman of intelligence and education, well equipped for his profession, of pleasant address and deservedly popular. He will be greatly missed.

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#### Summary of Reports from County Superintendents of Health, for February, 1906, (seventy-nine counties reporting).

In the blanks on which these reports are made the following items are called for:

1. The number of cases of small pox, measles, whooping-cough, scarlatina, diphtheria, typhoid fever, pernicious malarial fever, hemorrhagic malarial fever, yellow fever and cholera which have occurred in the county during the past month.
2. The diseases which have been prevalent in the county, and in what parts.

3. Epidemics among domestic animals.

4. Remarks as to special unsanitary conditions in the county.

In few counties do physicians generally report these details to the Superintendent, though furnished with blanks for that purpose, and in most cases he has to depend upon himself alone in making his report.

Details as to the jails, houses of correction, and county homes are also given in these reports and will be found tabulated on other pages.

ALAMANCE—Dr. R. A. Freeman, Burlington. Measles (100) in several sections.

ALEXANDER—Dr. T. F. Stevenson, Taylorsville. No diseases reported.

ALLEGHANY—Dr. Robt. Thompson, Sparta. Pneumonia and pleuritis in all parts. Some influenza and rheumatism.

ANSON—No report.

ASHE—Dr. L. C. Gentry, Crumpler. A few cases of pneumonia and some deaths from it. Influenza, of rather light character, in all parts. The jail is kept full of United States prisoners to the detriment of others.

BEAUFORT—Dr. Joshua Tayloe, Washington. Two cases of typhoid fever. Pneumonia in many parts.

BERTIE—Dr. H. V. Dunstan, Windsor. Bronchitis and pneumonia of mild type in some parts. Hog cholera.

BLADEN—Dr. Newton Robinson, Elizabethtown. A good many cases of measles and some pneumonia.

BRUNSWICK—Dr. D. I. Watson, Southport. Fifteen cases of measles. The Commissioners have decided not to move the Home nearer to the county seat. It is greatly in need of repairs.

BUNCOMBE—Dr. E. C. Starnes, Asheville. Measles and mumps. An epidemic of distemper in horses.

BURKE—Dr. J. L. Laxton, Morganton. Measles (80) and whooping cough in nearly all parts.

CABARRUS—Dr. Robert S. Young, Concord. Measles (92), r6theln and pneumonia in all parts. Three cases of typhoid fever.

CALDWELL—Dr. A. A. Kent, Lenoir. Influenza and measles in all parts.

CAMDEN—No Board of Health.

CARTERET—Dr. George N. Ennett, Beaufort. Ten cases of whooping cough. Bronchial and catarrhal troubles in all parts.

CASWELL—Dr. W. O. Spencer, Yanceyville. Measles, whooping cough and catarrhal fever in several sections.

CATAWBA—After the death of Dr. J. M. McCorkle, Dr. D. McD. Yount, of Newton, was elected Superintendent of Health. He reports measles of mild type as prevalent to some extent all over the county.

CHATHAM—No report.

CHEROKEE—Dr. J. F. Abernathy, Murphy. Measles (400) cases in all parts. No deaths from it so far as known.

CHOWAN—Dr. R. H. Winborne, Rockyhock. Pneumonia, catarrhal diseases and rheumatism in all parts. Three or four cases of scarlatina in Edenton, kept in check by quarantine. Some hog cholera in one township. Some distemper in horses brought by dealers.

CLAY—Dr. W. E. Sanderson, Hayesville. Measles (20) epidemic.

CLEVELAND—Dr. O. P. Gardner, Shelby. Measles and whooping cough in all parts.

COLUMBUS—Dr. I. Jackson, Whiteville. Measles and influenza to a limited extent.

CrAVEN—Dr. J. W. Duguid, Newbern. Ten cases of measles and one each of diphtheria and typhoid fever. Influenza in all parts.

CUMBERLAND—Dr. J. Vance McGougan, Fayetteville. Two cases of whooping cough and two of scarlatina. An epidemic of measles and mumps in all parts. Quite a number of people living east of the Cape Fear River in malarial districts are sinking deep wells. Work on the new jail will begin in a few days.

CURRITUCK—No Board of Health.

DARE—Dr. W. B. Fearing, Manteo. Health unusually good. I have complained to the commissioners and sheriff of the condition of the jail.

DAVIDSON—Dr. John Thames, of Lexington. Measles (several hundred cases), bronchitis and pneumonia in all parts. Two cases of typhoid fever.

DAVIE—Dr. James McGuire, Mocksville. Measles and pneumonia.

DUPLIX—Dr. J. C. Grady, Magnolia. Pneumonia and malarial fever. Efforts are being made for better buildings at the Home.

DURHAM—Dr. John M. Manning, Durham. Five cases of measles and two of typhoid fever. Mumps, pneumonia and catarrhal fever, and tonsillitis in some parts.

EDGEcombe—Dr. Donald Williams, Tarboro. Whooping cough and mild catarrhal troubles in all parts.

FORSYTH — Dr. E. F. Strickland, Bethania. Measles in many parts and some pneumonia.

FRANKLIN—Dr. E. S. Foster, Louisburg. No disease of any importance.

GASTON—Dr. J. H. Jenkins, Dallas. Measles and pneumonia in all parts heard from and la grippe in some.

GATES—A letter from Dr. Costen informs us that the County Board of Health failed to meet on the first Monday in September and elect a superintendent and that the Commissioners had refused to elect, or to pay any fees.

GRAHAM—No Board of Health.

GRANVILLE—Dr. Wm. O. Baskerville, Oxford. La grippe, measles and mumps in many parts.

GREENE—Dr. Joseph E. Grimsley, Snow Hill. Two cases of measles and one of diphtheria. Influenza in all parts.

GUILFORD—Dr. W. J. Richardson, Greensboro. Measles in all parts.

HALIFAX—Dr. I. E. Green, Weldon. Five cases of measles. Very healthy.

HARNETT—Reporter, Dr. J. E. McKay, Dickinson. A few cases of measles in one section. Bronchial troubles and pneumonia in nearly all parts.

HAYWOOD—Dr. J. Howell Way, Waynesville. Bronchitis, pneumonia and measles quite prevalent in all parts, and whooping cough in southern section. Four cases of typhoid fever in Crabtree and Fines Creek townships.

HENDERSON—Dr. J. L. Egerton, Hendersonville. No report.

HERTFORD—Dr. John W. Tayloe, Union. One case of typhoid fever. Bronchial troubles.

HYDE—No Board of Health.

IREDELL—Dr. W. J. Hill, Statesville. Measles and whooping cough. Some pneumonia. Dr. J. C. King reports a

case of hydrophobia, treated by himself. An old colored man was bitten by a "mad dog" a month or so previous to his last sickness. He died in convulsions at last, only a short time after they came on.

**JACKSON**—Dr. W. F. Tompkins, Webster. Measles (40) and whooping cough (8) in several parts. Some cholera in chickens and hogs and distemper in horses.

**JOHNSTON**—Dr. R. J. Noble has been elected by the Board of County Commissioners to fill the vacancy caused by the death of Dr. L. L. Sasser.

**JONES**—Dr. R. A. Whitaker, Trenton. No report.

**LENOIR**—Dr. James M. Parrott, Kinston. Acute bronchitis and false croup in all parts.

**LINCOLN**—Dr. Thos. F. Costner, Lincolnton. Measles (25), mumps and pneumonia.

**MCDOWELL**—Dr. Geo. I. White, Marion. No report.

**MACON**—Dr. S. H. Lyle, Franklin. Measles and whooping cough in all parts. An epidemic of distemper in horses.

**MADISON**—Dr. Jas. K. Hardwicke, Marshall. Measles, whooping cough and typhoid fever.

**MARTIN**—Dr. W. H. Harrell, Williamston. One case of hemorrhagic malarial fever. A mild form of influenza in all parts. A "mad dog" scare has caused the death of numerous worthless curs. Some kind of sickness has killed a great many also.

**MECKLENBURG**—Dr. H. M. Wilder, Charlotte. Measles has nearly disappeared. The jail is too crowded, owing to the length of time elapsing between

terms of court. We are making preparation for building an extra asylum building at the county home for taking care of the incurable insane. The convict camps are in excellent condition.

**MITCHELL**—Dr. C. E. Smith, Bakersville. La grippe, parotitis, rubeola, and pertussis in nearly all parts. A few cases of typhoid fever and pneumonitis.

**MONTGOMERY**—Dr. W. A. Simmons, Troy. Four cases of measles.

**MOORE**—Dr. Gilbert McLeod, Carthage. Measles (15 or 20), whooping cough (12) and a few cases of mumps. Acute catarrhal diseases and pneumonia in all parts.

**NASH**—Dr. J. J. Mann, Nashville. Typhoid and hemorrhagic malarial fever in certain sections.

**NEW HANOVER**—Dr. J. C. Shepard, Wilmington. Measles (400) in all parts. Two cases of typhoid and one of hemorrhagic malarial fever.

**NORTHAMPTON**—Dr. H. W. Lewis, Jackson. Four cases of hemorrhagic malarial fever. La grippe and pulmonary troubles in all parts.

**OXSLOW**—Dr. E. L. Cox, Jacksonville. Very little sickness. Repairs have been made at the county home.

**ORANGE**—Dr. D. C. Parris, Hillsboro. Measles, mumps and catarrhal affections in all parts.

**PAMLICO**—No Board of Health.

**PASQUOTANK**—Dr. J. E. Wood, Elizabeth City. Pneumonia, catarrhal fever and tonsilitis.

**PENDER**—Dr. Geo. F. Lucas, Currie. Measles in Eastern part. Some parts of the county need drainage badly. Each month something is done in the way of improvement of the condition of the public institutions.

PERQUIMANS—Dr. J. W. Speight, Hertford. Three cases of measles. Bronchitis and pneumonia.

PERSON—The County Commissioners have elected Dr. J. A. Wise to fill out the unexpired term of Dr. Norton, deceased.

PITT—Dr. Frank W. Brown, Greenville. Four cases of measles and one of scarlatina.

POLK—Dr. C. J. Kenworthy, Tryon. One case of measles. In compliance with my request the County Commissioners propose repairing the jail.

RANDOLPH—Dr. T. T. Ferree, Ashboro. Several cases of measles and typhoid fever.

RICHMOND—Dr. W. H. Steele, Rockingham. Measles and a few cases of mumps. One case of diphtheria.

ROBESON—Dr. T. A. Norment, Jr., Lumberton. Measles all over the county.

ROCKINGHAM—Dr. D. W. Courts, Reidsville. Measles and mumps epidemic in Reidsville. Several cases of influenza reported from the county.

ROWAN—Dr. John Whitehead, Salisbury. Measles (500), whooping cough (200), chicken pox and mumps in all parts. Two cases of diphtheria and two of typhoid fever.

RUTHERFORD—Dr. E. B. Harris, Rutherfordton. Measles and whooping cough still abundant. The public buildings are kept as clean and nice as houses of their kind can be.

SAMPSON—Dr. Jno. A. Stevens, Clinton. Measles everywhere and of a severe type. A few cases of whooping cough. Bronchitis and pneumonia.

STANLY—Dr. D. P. Whitley, Millingport. Measles (about 200 cases) in all

parts. An epidemic of chicken cholera. The new jail has steel cells and the sewerage and ventilating arrangements are about perfect. We think we have the best in the State.

STOKES—Dr. W. L. McCanless, Danbury. Measles (30) in all parts.

SURRY—Dr. John R. Woltz, Dobson. Measles epidemic. Two cases of scarlatina and four of typhoid fever. Bronchial troubles in all parts. The jail is a little crowded but the number will be reduced at the coming term of court. It is being scoured and re-white-washed.

SWAIN—Dr. A. M. Bennett, Bryson City. Two cases of measles and two of typhoid fever. Whooping cough among the Cherokees, followed in several cases by catarrhal pneumonia.

TRANSYLVANIA—Dr. M. M. King, Brevard. Ten cases of measles and two of typhoid fever.

TYRRELL—Dr. B. W. Cohn, Columbia. No report.

UNION—Dr. J. E. Ashcraft, Monroe. No report.

VANCE—Dr. J. H. Tucker, Henderson. Influenza, whooping cough, bronchitis, pneumonia (23) and measles (28) in many parts. Three cases of typhoid fever and two of varicella. Six reports from thirteen physicians.

WAKE—Dr. P. E. Hines, Raleigh. Measles reported from Cary, New Light, Myatt's Mill and Raleigh, whooping cough from Morrisville, Cary, Myatt's Mill and Raleigh. Four cases of typhoid fever at Wake Forest, among negroes, and one at Raleigh. A few cases of varicella. Influenza, bronchitis and pneumonia from all townships reporting. Eight reports received



out of thirty requests on postal cards besides blanks previously sent.

**WARREN**—Dr. Geo. A. Foote, Warrenton. Influenza and bronchitis in most parts. An epidemic of distemper in horses and dogs.

**WASHINGTON**—No Board of Health.

**WATAUGA**—Dr. W. B. Council, Boone. Measles (50) in all parts, causing a few deaths among old people and small children.

**WAYNE**—Dr. W. J. Jones, Jr., Goldsboro. Four cases of scarlatina. Catarrhal troubles in all parts.

**WILKES**—Dr. J. M. Turner, Wilkesboro. Measles and whooping cough in middle and southern parts.

**WILSON**—Dr. N. Anderson, Wilson. No diseases to report. Health never better.

**YADKIN**—Dr. T. R. Harding, Yadkinville. Very little sickness. Some mild cases of la grippe.

**YANCEY**—Dr. J. L. Ray, Burnsville. Measles and whooping cough in some parts. The jail is in very good condition considering the number of inmates who are mostly United States prisoners. The Home is about as usual, it has lately been made a little more comfortable.

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### Review of Diseases Reported for February, 1896.

**BRONCHITIS**—From Bertie, Carteret, Davidson, Harnett, Haywood, Hertford, Lenoir, Perquimans, Sampson, Surry, Vance, Wake and Warren—13 counties.

**CHOLERA, IN FOWLS**—From Jackson and Stanly.

**CHOLERA, IN HOGS**—From Bertie, Chowan and Jackson.

**DIPHTHERIA**—From Craven, Greene, Richmond and Rowan.

**DISTEMPER, IN HORSES**—From Buncombe, Chowan, Jackson, Macon and Warren.

**INFLUENZA**—From Alleghany, Ashe, Caldwell, Columbus, Craven, Gaston, Granville, Greene, Martin, Mitchell, Northampton, Rockingham, Vance, Wake, Warren and Yadkin—16 counties.

**MALARIAL FEVER**—From Duplin, Martin, Nash, New Hanover and Northampton.

**MALARIAL FEVER, HEMORRHAGIC**—From Martin, Nash, New Hanover and Northampton.

**MEASLES**—From Alamance, Bladen, Brunswick, Buncombe, Burke, Cabarrus, Caldwell, Caswell, Catawba, Cherokee, Clay, Cleveland, Columbus, Craven, Cumberland, Davidson, Duplin, Durham, Forsyth, Gaston, Granville, Greene, Guilford, Halifax, Harnett, Haywood, Iredell, Jackson, Lincoln, Macon, Madison, Mecklenburg, Mitchell, Montgomery, Moore, New Hanover, Orange, Pender, Perquimans, Pitt, Polk, Randolph, Richmond, Robeson, Rockingham, Rowan, Rutherford, Sampson, Stanly, Stokes, Surry, Swain, Transylvania, Vance, Wake, Watauga, Wilkes and Yancey—58 counties.

**MUMPS**—From Buncombe, Cumberland, Duplin, Granville, Lincoln, Mitchell, Moore, Orange, Richmond, Rockingham and Rowan—11 counties.

**PNEUMONIA**—From Alleghany, Ashe, Beaufort, Bertie, Bladen, Cabarrus, Chowan, Davidson, Duplin, Forsyth, Gaston, Harnett, Haywood, Ire-

dell, Lincoln, Mitchell, Northampton, Pasquotank, Perquimans, Sampson, Vance and Wake—22 counties.

**RHEUMATISM**—From Alleghany and Chowan.

**RÖTHELN**—From Cabarrus.

**SCARLATINA**—From Chowan, Cumberland, Pitt, Surry and Wake.

**TONSILITIS**—From Duplin and Pasquotank.

**TYPHOID FEVER**—From Beaufort, Cabarrus, Craven, Davidson, Durham, Haywood, Hertford, Madison, Mitchell, Nash, New Hanover, Randolph, Rowan, Surry, Swain, Transylvania, Vance and Wake—18 counties.

**WHOOPIING COUGH**—From Burke, Caswell, Cleveland, Cumberland, Edgecombe, Haywood, Iredell, Jackson, Macon, Madison, Mitchell, Moore,

Rowan, Rutherford, Sampson, Swain, Vance, Wake, Wilkes and Yancey—20 counties.

Summary of Mortuary Reports for Feb., 1896.  
(Twenty-seven towns.)

	White.	Col'd.	Total.
Aggregate population.....	87,772	62,913	150,685
Aggregate deaths.....	130	119	249
Representing annual death rate per 1000.....	17.8	22.5	19.8

*Causes of Death.*

Typhoid fever.....	1	2	3
Whooping cough.....	1	1	2
Measles.....	10	14	24
Pneumonia.....	22	21	43
Consumption.....	23	27	50
Brain diseases.....	7	4	11
Heart diseases.....	12	7	19
Neurotic diseases.....	1	1	2
Diarrheal diseases.....	4	4	8
All other diseases.....	45	33	78
Accident.....	2	4	6
Suicide.....	0	1	1
Violence.....	2	0	2
	<hr/>	<hr/>	<hr/>
Deaths under 5 years.....	130	119	249
Still-born.....	33	55	68
	4	14	18

## Condition of Jails and County Homes by Counties for February, 1896.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Alamance...	good	21 (a)				good	37			
Alexander .	fair	1				fair	6			3
Alleghany...	good	1				good	7			
Anson .....										
Ashe .....	†	7	400				9	600		
Beaufort ...	very good	16				very good	13			
Bertie .....	very good	7 (b)			3		16		2	3
Bladen .....	no change	1				no change	6			
Brunswick ..		3	*			†	12	900		
Buncombe .	very good	66 (c)	*	14	41	very good	37	*	18	18
Burke .....	no change	7				very good	14			
Cabarrus ...	good	27 (d)	*	3	9	good	27	813	10	14
Caldwell .....		7	*	0	4		4	*	1	2
Camden .....										
Carteret .....	fair	4					0			
Caswell ...	no change	4				no change	13			
Catawba ...	well kept						39			
Chatham .....										
Cherokee .....		4					4			
Chowan ...	well kept	16	*			well kept	5	*	1	0
Clay .....		2			2					
Cleveland ...	good	22	1,000		15	good	19	900		4
Columbus ...	good	8	*		2	good	16	*		0
Craven .....	good	11				good	37			
Cumberland ..		13					16			
Currituck ..										
Dare .....	not good†	3					0			
Davidson ...	very good	6				very good	26			
Davie .....	no change	6		1	5	no change	10		2	0
Duplin .....		1	500			not good	14	450	2	1
Durham .....	good	38 (e)	* (f)			good	20	*		
Edgecombe ..	fair	9	*	2	3	fair	25	*	1	2
Forsyth .....	good	9	1,000	2	4	good	33	*	9	8

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 11 in House of Correction. (b) Includes 5 in House of Correction. (c) includes 48 in House of Correction. (d) Includes 19 in House of Correction. (e) Includes 27 in House of Correction. (f) For House of Correction 321.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each, (in cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Franklin .....	very good	4	*			very good	28	*		
Gaston .....	good					good				
Gates .....										
Graham .....										
Granville.....	good	7	600	3	6	good	31	600	3	4
Greene .....	good	3	600	0	3	good	8	1,000	7	4
Guilford .....	bad	53 (a)					38			
Halifax.....		11		4	3		40		5	4
Harnett .....										
Haywood .....	good	9		0	7	good	5			
Henderson .....										
Hertford .....	no change	0				no change	7			
Hyde .....										
Iredell .....	no change					no change	26			
Jackson .....		4	*	1	3		4	*	0	0
Johnston .....										
Jones .....										
Lenoir .....		6								
Lincoln.....	good	3	*	1	2	good	22	600	13	6
McDowell.....										
Macon.....	no change	4	*	3	4	no change	11	600	7	8
Madison.....	good	9	500	4	2		19	400	7	9
Martin.....	no change	1	*	0	0	no change	16	*	5	3
Mecklenburg ..	†	123 (b)	400			fair	59			
Mitchell .....	very good	6				very good	4			
Montgomery....	good	7	500			good	17	500		
Moore .....	no change	5	*	0	3	good	5	*	2	2
Nash.....	good	5	600	2	4	good	31	1,000	8	7
New Hanover ..	good	24 (c)	400	7	17	good	27	*	23	8
Northampton ..	good	5	1,000	0	2	good	37	850	10	13
Onslow .....	good	5				good	7			
Orange .....	no change	7	500	0	6	good	18	1,000	8	10
Pamlico.....										

\* Space exceeds 1,000 cubic feet. † See Summary of Reports from County Superintendents of Health. (a) Includes 31 in House of Correction. (b) Includes 90 in House of Correction. (c) Includes 10 in House of Correction.

## Condition of Jails and County Homes by Counties.—CONTINUED.

COUNTIES.	JAIL.					HOME.				
	General Sanitary Condition.	Number Prisoners confined.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.	General Sanitary Condition.	Number inmates.	Space allotted each. (In cubic feet.)	Number giving evidence of successful vaccination.	Number who can read and write.
Pasquotank.....		4	*	0	2		30	*	0	11
Pender.....	good	0				good	4		0	0
Perquimans.....		1					6			
Person.....										
Pitt.....	good	17	*		6	good	23	*		2
Polk.....	good †	2	*	1	2					
Randolph.....	good	11		6		well kept	31			6
Richmond.....	fair	20	760	0	16	fair	18	*	0	9
Robeson.....	good	16				good	13			
Rockingham.....	good	4	*			good	36	5-700		
Rowan.....							24	500+	12	11
Rutherford.....	good	12				+	16			
Sampson.....		5					17			
Stanly.....	good †	4	*		2	good	9	*		2
Stokes.....	good	6	800	1	3	good	13	600	3	4
Surry.....	†	15	200	2	6		20	*		4
Swain.....	good	16	400			good	4			
Transylvania.....	good	1	*		1	good	5	*		1
Tyrrell.....										
Union.....										
Vance.....	fair	7	*	3		very good	12	*	2	
Wake.....	very good	97 (a)				very good	65			
Warren.....	very good	4	900	2	1	very good	23	1,000	2	3
Washington.....										
Watauga.....	good	8				good	7			
Wayne.....	good	8 (b)			2	good	13			2
Wilkes.....	no change	10				no change	14			
Wilson.....	good	7		2	4	good	33		6	4
Yadkin.....	fair	10		0	3	good	21		0	7
Yancey.....	†	11	350			†	3			

\*Space exceeds 1,000 cubic feet. †See Summary of Reports from County Superintendents of Health. (a) Includes 80 in House of Correction. (b) Includes 6 in House of Correction.

Mortuary Report for February, 1896.

TOWNS AND REPORTERS.	RACES.	POPULA- TION.		TEMPORARY ANNUAL DEATH RATE PER 1,000.	Typhoid Fever.	Scarlet Fever.	Malarial Fever.	Diphtheria.	Whooping Cough.	Measles.	Pneumonia.	Consumption.	Brain Diseases.	Heart Diseases.	Neurotic Diseases.	Diarrhoeal Diseases.	All Other Diseases.	Accident.	Suicide.	Violence.	TOTAL DEATHS.	By Towns Deaths under 5 years.	Still Born.	
		By Races.	Total.																					By Races.
Asheville Dr. E. C. Sannes	White. Colored.	8,000 4,000	12,000	31.5 12.0	25.0					3	12	1	1	1					1			21	25	1
Charlotte C. A. Spratt, H. off'r	White. Colored.	10,855 8,796	19,651	23.5 16.4	21.9			1	2	2	4	1	1	1	10			3	1			24	36	11
Durham Dr. J. M. Manning.	White. Colored.	4,000 2,000	6,000	24.0 12.0	20.0													1	1			2	10	2
FAYETTEVILLE Dr. J. V. McGougan.	White. Colored.	3,000 2,000	5,000	28.0 18.0	34.0						1	1	1									7	10	1
GOLDSBORO T. H. Balm, Secretary	White. Colored.	3,700 1,700	5,400	9.7 35.3	17.8						1	2										3	5	2
GREENSBORO City Clerk J. S. Michaux	White. Colored.	5,500 2,500	8,000	11.3 43.2	24.0							1	1		5							7	16	2
HENDERSON Dr. W. J. Judd.	White. Colored.	2,250 2,000	4,250	5.3 24.0	14.1																	1	5	1
Hillsboro Dr. D. C. Parris.	White. Colored.	400 300	700	0.0 40.0	17.1							1										0	1	
JACKSONVILLE Dr. E. L. Cox.	White. Colored.	300 100	400	0.0 0.0	0.0																	0	0	
LENOIR Dr. A. A. Kent	White. Colored.	800 300	1,100	15.0 40.0	21.8								1									1	2	1
MONROE Dr. J. M. Blair.	White. Colored.	1,800 600	2,400	0.0 60.0	15.0					2	1											0	3	
OXFORD Dr. Wm O. Baskerville	White. Colored.	1,600 1,400	3,000	7.5 17.1	12.0							1				1						2	3	1
RALEIGH T. P. Sale, Clerk B. H.	White. Colored.	8,500 7,500	16,000	15.5 14.4	15.0			2	2				2		5							11	20	3
ROCKINGHAM Dr. W. H. Steele.	White. Colored.	1,300 450	1,750	39.9 26.7	34.3						1		1									4	5	1
ROCKY MOUNT Dr. G. L. Wimberley.	White. Colored.	1,600 800	2,400	7.5 0.0	5.0							1										0	1	
SALEM C. S. Hauser H. Officer	White. Colored.	3,942 342	4,284	6.1 15.4	19.6							5					2					2	7	2
SALISBURY Dr. John Whitehead.	White. Colored.	3,500 1,500	5,000	21.6 32.0	24.0							3	1		1	1						6	10	
SCOTLAND NECK Mayor J. A. Perry.	White. Colored.	775 425	1,200	15.5 0.0	10.0																	1	1	
SOUTHPORT C. T. L. A. Galloway	White. Colored.	750 450	1,200	16.0 26.7	20.0							1										0	2	
Statesville Dr. W. J. Hill.	White. Colored.	2,500 1,000	3,500	0.0 12.0	3.4													1				0	1	
TARBORO Dr. Donald Williams	White. Colored.	1,300 1,200	2,500	9.2 10.0	9.6													1				1	2	
WARRENTON Dr. G. A. Foote.	White. Colored.	1,000 500	1,500	0.0 24.0	8.0							1										0	1	1
WASHINGTON Dr. Joshua Tayloe.	White. Colored.	3,000 2,500	5,500	12.0 28.8	19.6	1						1	1		1	1	2					3	9	2
WELDON Mayor J. T. Goode.	White. Colored.	700 750	1,450	34.3 48.0	41.4																1	2	5	1
WILMINGTON Dr. J. C. Shepard.	White. Colored.	9,000 13,000	22,000	25.3 13.8	18.5							3	5	3	2	1		5				19	31	4
WILSON Dr. N. Anderson.	White. Colored.	2,500 2,000	4,500	9.6 12.0	10.7							3	4	1						1		2	4	1
WINSTON Dr. John Bynum.	White. Colored.	5,200 4,800	10,000	9.2 60.0	33.6																2	4	28	2

N. B. The reporters for the cities and towns printed in bold faced type have signed this certificate. I hereby certify that this report gives the whole number of deaths occurring within the corporate limits during the above month. \*Visitors.

### METEOROLOGICAL SUMMARY FOR NORTH CAROLINA, FEBRUARY, 1896.

Furnished by the North Carolina Agricultural Experiment Station and State Weather Service.

H. B. BATTLE, PH. D., DIRECTOR.

C. F. VON HERRMAN, METEOROLOGIST.

STATIONS.	TEMPERATURE, (DEGREES FAHR.)								Total Snowfall.	Total Precipitation.	NO. OF DAYS.				Prevailing Wind.	
	Monthly Mean.	Highest.	Date.	Mean Maximum.	Lowest.	Date.	Mean Minimum.	Monthly Range.			Mean Daily Range.	Clear.	Partly Cloudy.	Cloudy.		Rainy.
Bakersville.....	37.5	67	3	49.6	-10	21	25.4	77	24.2		14	4	11			
Chapel Hill.....	41.8	69	27	52.9	7	20	30.7	62	22.2	3.5	6.46	17	3	9	10	S W
Charlotte.....	44.3	70	27	53.9	6	21	34.7	64	19.2	1.0	5.40	11	8	9	10	S W
Edenton.....	44.8	67	1	54.6	11	21	34.9	56	19.7	5.0	4.67	11	7	11	12	S
Fayetteville.....	45.6	71	13	54.3	8	21	37.0	63	16.3	5.0	5.52	11	7	11	7	S W
Falkland.....	46.7	76	13	54.0	12	21	41.4	64	12.6	7.0	7.09	19	5	5	5	
Littleton.....	41.8	69	13	51.2	8	20	32.5	61	18.7	4.0	5.60	9	5	15	7	S W
Lenoir.....	40.0	65	27	47.6	4	21	32.6	61	15.0	2.5	4.73	13	7	9	7	W
Louisburg.....	42.8	70	13	53.4	9	21	32.3	61	21.1	5.0	6.58				9	
Mt. Airy.....	38.7	65	<sup>23</sup> <sub>27</sub>	49.4	3	21	28.0	62	21.4	0.5	4.66	6	14	9	9	S W
Mt. Pleasant.....	44.4	70	27	56.3	6	21	32.5	64	23.8	2.5	5.89	8	10	11	9	S W
Moncure.....	43.8	72	2	55.2	8	21	32.3	64	22.9	3.0	6.37	9	14	6	8	W
Newbern.....	48.4	76	2	60.4	12	21	36.4	64	24.0	3.0	4.65				10	
Oak Ridge.....	41.7	74	27	55.2	3	21	28.2	71	27.0	1.1	9.40	18	4	7	11	N W
Pittsboro.....	41.4	67	2	50.6	5	21	32.1	62	28.5	2.2	6.82	13	9	7	9	S W
Raleigh.....	43.8	71	1	52.8	8	21	34.8	63	18.0	7.0	6.73	7	11	11	12	S W
Rockingham.....	46.8	74	<sup>2</sup> <sub>29</sub>	61.0	8	21	32.6	66	28.4	2.0	5.90	16	9	4	8	W
Roxboro.....	41.6	65	1	52.1	4	21	31.1	61	21.1	T	5.15	14	3	12	7	
Soapstone Mount...	41.0	68	<sup>26</sup> <sub>27</sub>	54.8	4	18	27.3	64	27.5	2.5	6.30	6	13	10	13	S W
Saxon.....	41.4	68	27	51.2	3	21	31.6	65	19.6	0.3	4.55	10	9	10	10	S W
Selma.....	44.2	74	13	54.9	10	21	33.6	64	21.3	6.0	7.10				7	
Salisbury.....	41.5	69	27	50.6	5	21	32.4	64	18.2	3.0	5.93				7	
Waynesville.....	38.0	68	27	47.2	-6	21	28.9	74	18.3	1.7	4.31	16	2	11	7	W
Wileyton.....	43.9	71	13	54.4	10	21	33.4	61	21.0	4.5	4.40	8	7	14	8	S W
Weldon.....	42.7	69	13	52.6	10	21	32.9	59	19.7	4.0	6.84	10	9	10	11	S
Wilmington.....	48.8	72	2	57.9	12	21	39.6	60	18.3	12.0	4.74	13	11	5	10	S W

#### State Meteorological Summary for February, 1896.

Mean barometer 30.00 inches; normal for Feb., 30.13. Highest barometer 30.60 on the 22d at Wilmington. Lowest barometer 29.00 on the 6th at Raleigh. Mean temperature 42.8 degrees; normal for Feb., 43.6. Highest temperature 76 on the 2nd at Newbern. Lowest temperature 10 on the 21st at Bakersville. Average rainfall 5.64 inches; normal for February 4.27 inches. Greatest monthly rainfall 9.40 inches at Oak Ridge; least monthly rainfall 3.68 inches at Greenville. Average number of clear days 12; partly cloudy 8; cloudy 9; rainy 9. Prevailing wind direction Southwest. Average velocity 11.0 miles per hour. Normal direction for February Southwest; normal velocity 9.3 miles per hour.

WILMINGTON  
METEOROLOGICAL SERVICE











